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**EPA Superfund
Record of Decision Amendment:**

**Arcanum Iron & Metal,
Darke County, OH
6/18/1997**



**U.S. EPA SUPERFUND
RECORD OF DECISION AMENDMENT**

**ARCANUM IRON AND METAL SUPERFUND SITE
ARCANUM, TWIN TOWNSHIP, DARKE COUNTY, OHIO**

JUNE 1997

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**DECLARATION
FOR THE
RECORD OF DECISION AMENDMENT**

**ARCANUM IRON AND METAL SUPERFUND SITE
ARCANUM, TWIN TOWNSHIP, DARKE COUNTY, OHIO**

JUNE 1997

DECLARATION FOR THE RECORD OF DECISION AMENDMENT

SITE NAME AND LOCATION

Arcanum Iron and Metal ("AIM") Superfund Site, Village of Arcanum, Twin Township, Darke County, Ohio.

STATEMENT OF BASIS AND PURPOSE

This decision document represents the selected final remedial action for the AIM Superfund Site in the Village of Arcanum, Twin Township, Darke County, Ohio. This action was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA"), and the National Oil and Hazardous Substances Contingency Plan ("NCP"). The decisions contained herein are based on information contained in the administrative record for this site. The State of Ohio is expected to concur with the selected remedy.

ASSESSMENT OF THE REMEDY

Actual or threatened releases of hazardous substances from the AIM Site, if not addressed by implementing the response action selected in this Record of Decision ("ROD"), may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE REMEDY

The selected remedial action calls for the following actions to be taken at the AIM Site:

- (1) removal of approximately 4,000 cubic yards of lead acid battery casing chips ("battery casing chips") found both in the buildings and in a separate stockpile on the AIM Site;
- (2) treatment of the battery casing chips either on-site, or off-site at a U.S. EPA-approved Resource Conservation and Recovery Act ("RCRA") Subtitle C treatment, storage, and disposal facility ("a permitted TSDF"), to meet the land disposal restrictions ("LDRs"), followed by disposal in an approved landfill;
- (3) demolition and removal of three buildings on the AIM Site in order to address the foundations and remove contaminated soil and suspected battery casing chips down to six feet below grade;
- (4) clearing the Site of all trees;
- (5) removal and disposal or recycling of demolition debris, drums, flat-bed trailers, and an above-ground (500 gallon) tank;
- (6) removal of an Underground Storage Tank ("UST") due to its location within the area of contamination;
- (7) investigation of sediments in Sycamore Ditch and if contaminated with lead in excess of applicable standards, removal, dewatering and placement of sediments contaminated with lead at levels less than 1550 milligrams per kilogram ("mg/kg") on the former operational area of the AIM Site;
- (8) removal of contaminated soils to meet a revised cleanup level of 1550 mg/kg lead in soil for soils within the former operational area of the Site (within the existing fence line), and 400 mg/kg lead in soil for soils outside the former operational area (outside the fence line);

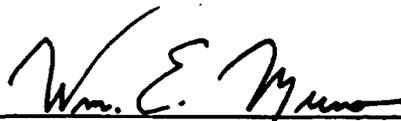
(9) disposal of soils outside the former operational area (outside the fence line) that are over 400 mg/kg lead but under 1550 mg/kg lead on the former operational area; (10) disposal of soils and sediments contaminated with lead in excess of 1550 mg/kg that pass the toxicity characteristic leaching procedure ("TCLP") test in an approved landfill; (11) treatment of soils and sediments contaminated with lead in excess of 1550 mg/kg that fail the TCLP test, either on-site or off-site at a permitted TSDF to meet the LDRs, followed by disposal in an approved landfill; (12) placement of approximately 36,000 cubic yards of soil in the excavated areas; (13) capping the clay drain tile that runs from the AIM Site to Sycamore Ditch at the AIM Site and connecting to the existing Village of Arcanum storm water collection system, or reconnecting the drain with existing drain tiles once remedial actions are complete; (14) maintaining and repairing the private road (Pop Rite Lane), if used, that contractor trucks must travel over for the transportation and disposal of the battery casing chips, contaminated soils, demolition debris, as well as hauling backfill to the Site; resurfacing the private road once the remedial design/remedial action ("RD/RA") phase is complete; (15) monitoring the groundwater, air and surface water at the Site during the RD/RA phase; (16) recording deed restrictions for the Site; and (17) maintaining site security throughout the RD/RA phases of this project.

STATUTORY DETERMINATIONS

This final remedial action is protective of human health and the environment, complies with Federal and State applicable or relevant and appropriate requirements ("ARARs") and is cost-effective. The selected remedial action utilizes permanent solutions and considered the use of alternative treatment technologies to the maximum extent practicable. This remedy addresses the statutory preference for treatment that reduces toxicity, mobility, or volume as a principal element by treating the battery casing chips, as well as soils and sediments contaminated with lead in excess of 1550 mg/kg that fail the TCLP test, to meet LDRs and pass the TCLP test. Due to the significant volume of waste at the Site, soils contaminated with lead in excess of 1550 mg/kg that pass the TCLP test will not be treated in order to remain on-site, but will be disposed of at an approved landfill. A review will be conducted to ensure that the remedy continues to provide adequate protection of human health and the environment within five years after commencement of the remedial action.

6/18/97

Date



William E. Muno

Director, Superfund Division

**RECORD OF DECISION AMENDMENT SUMMARY
ARCANUM IRON AND METAL SUPERFUND SITE
VILLAGE OF ARCANUM, TWIN TOWNSHIP, DARKE COUNTY, OHIO**

I. SITE NAME, LOCATION, AND DESCRIPTION

The Arcanum Iron and Metal Superfund ("AIM") Site is located in west-central Ohio, approximately 25 miles northwest of Dayton, Ohio, in Twin Township, Darke County, Ohio. The site occupies about 4.5 acres, is fenced, and has little horizontal relief. The 4.5 acre site contains a saw building, office building, smelter building, used battery casing chips piles, septic tanks, and gas, electric and water utilities. The AIM Site is just outside the limits of the Village of Arcanum, Ohio. The AIM Site is zoned for light industrial or commercial operations. The area outside the fence is currently being farmed on two sides (west and south); the north side of the property is bordered by Pop Rite Lane and a light industrial operation is located on that property; the east side of the property is bordered by the former railroad right-of-way, now owned by Dayton Power and Light. There is a Federal Lien on 18.341 acres of property owned by Mr. Harold M. Shane, which includes the AIM Site property totaling 4.5 acres. The lien is dated August 31, 1989, and was sent to the Darke County Recorder in Greenville, Ohio on September 19, 1989.

The U.S. Environmental Protection Agency ("U.S. EPA") Region 5 is the lead agency for the AIM Site, and the State of Ohio Environmental Protection Agency ("Ohio EPA") is the support agency.

Approximately one acre of the site (in the central and eastern portions of the site) is covered with immature trees; nearly all with trunks less than 8 inches in diameter. On the north end of the site lies the former AIM Site office and saw buildings. The former office building is a 100 feet long by 30 feet wide one story brick and masonry building with a wood roof. The saw building is a roughly 120 feet long by 50 feet wide, irregular shaped wood storage building with a three foot high concrete skirt on the north and south side walls. Housed inside the saw building are approximately 3,200 cubic yards of ebonite battery casing chips. On the southern end of the site lie the lead smelter and a pile of an estimated 800 cubic yards of battery

casing chips. The battery casing chips are primarily ebonite; a small percentage of unchipped battery casings are also present. No lead acid batteries remain at the site. The smelter is a collapsed one story wood structure approximately 40 feet long by 15 feet wide. Along the west side of the site runs a service road to the smelter which appears to have been paved with battery casing chips. In addition, there is a pile of approximately 300 cubic yards of lead-contaminated soils from a site in downtown Arcanum ("AIM II") that were placed on the AIM Site during an emergency removal action conducted by the owner of the AIM Site in January and February of 1986.

The AIM Site ground surface is relatively level to gently sloping with elevations of approximately 1,050 ft above mean sea level. The surrounding land use is agricultural. However, to the immediate north of the AIM Site, across Pop Rite Lane, there is also a light commercial/industrial business. The soils encountered at the AIM Site include fill materials and glacial tills. The thickness of the soils range from approximately 20 to 33 feet.

There is one aquifer at the AIM Site, which has two zones, upper and lower, from which water can be withdrawn. The upper zone occurs in a permeable sand and gravel layer of limited extent which overlies the bedrock. Wells in this aquifer zone are reportedly not being used for domestic or municipal water supplies in the immediate area of the AIM Site. The lower aquifer zone occurs in the dolomitic limestone bedrock. Wells in the lower aquifer zone are used for the City of Arcanum municipal water supply and for many private wells one mile west of the AIM Site. Ground water flow in this aquifer is northeasterly.

Due to rain water run-off, lead collects in low-lying areas (surface depressions) of the AIM Site, which consists of clay-type soils. Water from the AIM Site enters the Sycamore Ditch through a storm sewer that discharges near the southwest corner of the Arcanum Wastewater Treatment Plant lagoons. Sycamore Ditch flows north from the storm sewer outfall, past the sewage treatment lagoons, and empties into Painter Creek.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

The AIM Site operated as a lead battery reprocessing facility from the early 1960's until 1982. The AIM facility accepted automobile and industrial batteries for reprocessing. During this operation, battery casings were split to extract the lead cores. This operation generated plastic and black rubber casings and battery acids. After the casings were split, the spent battery acid was released to the ground. In addition, an on-site lead smelter facility may have emitted lead-containing particulates during operation.

The plastic battery casings were stockpiled and then reprocessed. During reprocessing, lead oxide sludge was generated and then piled for recycling behind the saw building. During dry weather, the lead oxide sludge became a dust hazard and was controlled by wetting down the pile with water. This process generated water contaminated with suspended lead oxide particulate and soluble lead salt that flowed out of the back of the saw building through a small pipe and collected in surface depressions on the ground surface. The battery casing chips stockpile also generated runoff contaminated with lead oxide which tended to pond around the stockpile during rainstorms. The black rubber battery casings were ground into chunks and stockpiled on-site. These rubber battery casing chips contained high concentrations of lead. During rainstorms, lead particles were washed off into surface ponds on-site. Approximately 3,200 cubic yards of battery casing chips are currently stored in the former Saw Building, and another approximately 800 cubic yards are in a pile at the southeastern portion of the Site, near the former smelter building.

The earliest Ohio EPA file reference regarding the AIM site dates back to 1964 when a fish kill was reported in Painter Creek caused by contamination conveyed via Sycamore Ditch. The Ohio Department of Health requested that AIM initiate a program for collecting, neutralizing, and disposing of battery acid. In 1972, the Ohio EPA personnel visited the AIM Site in response to another fish kill in the local watershed and determined that the source of the discharge which resulted in the fish kill, came from the AIM Site. In October 1973, the Ohio EPA's Division of Waste Management and Engineering made the first of many site

visits to investigate AIM's operation. Over the next ten years, the Ohio EPA conducted data collection activities and took legal actions against AIM in an attempt to install on-site water treatment and waste storage systems. In January 1974, the Ohio EPA requested that the owner of the AIM Site apply for a Permit to Install an acid treatment system. The Ohio EPA spent the next 2 years trying to get AIM to install the treatment system and adhere to the conditions and restrictions of the permit.

In June 1979, the Ohio Attorney General on behalf of the Ohio EPA initiated enforcement proceedings against AIM. In October 1979, a Consent Decree was signed by the site owner to clean up the site. However, cleanup efforts were not satisfactorily completed. Subsequently, AIM was found to be in contempt of court in April 1980. From April 1980, the Ohio Attorney General's office continued to pursue legal actions for the cleanup of the AIM Site. In September 1980, a Citation and Notification of Penalty was issued to AIM for failure to install a treatment system. The Ohio EPA requested in April 1982 that legal action be taken to close the AIM facility. The AIM Company ceased operations at the AIM Site in December 1982. The processing equipment was removed by the owner in January 1983.

In January and February of 1986 approximately 300 cubic yards of lead-contaminated soils from a site in downtown Arcanum ("AIM II") were placed on the AIM Site during an emergency removal action conducted by the owner of the AIM Site. The owner of the AIM Site had operated the downtown site as a battery recycling facility prior to startup of the present AIM facility location.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

Various public meetings and availability sessions have been held by the U.S. EPA in the Village of Arcanum, Ohio between 1985 and the present to discuss the general progress of the AIM Superfund Site.

On October 10, 1996, the U.S. EPA conducted Community Involvement Plan interviews of residents and local politicians to update the public regarding AIM Site activities. The U.S. EPA issued a Proposed Plan for the AIM Site on January 27, 1997. The U.S. EPA provided a public comment period on the AIM Site Proposed Plan

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from January 27, 1997, through February 25, 1997, and conducted an evening public meeting on the AIM Proposed Plan on February 18, 1997, in the Village of Arcanum. The U.S. EPA's response to the public comments received are summarized in the attached Responsiveness Summary, which is Attachment A to this Record of Decision ("ROD"). This ROD will become part of the Administrative Record pursuant to the National Oil and Hazardous Substances Contingency Plan ("NCP") 40 C.F.R. Section 300.825(a)(2). The Administrative Record can be found at the Site repositories located at:

- 1) Arcanum Public Library
101 West North Street
Arcanum, Ohio
- 2) U.S. Environmental Protection Agency
Records Center, 7th Floor
77 West Jackson Blvd.
Chicago, IL

IV. SCOPE OF SELECTED REMEDY

The U.S. EPA has selected a remedial action to amend the original ROD for the AIM Site located in Arcanum, Ohio. The scope of the selected remedial action consists of excavation of battery casing chips for treatment to meet land disposal restrictions ("LDRs"), and disposal at a U.S. EPA-approved Resource Conservation and Recovery Act ("RCRA") Subtitle D Landfill ("an approved solid waste landfill"), excavation of soils contaminated with lead in excess of the cleanup level, and disposal at an approved solid waste landfill, backfilling excavated areas to grade with clean soils, excavation and removal of an underground storage ("UST") tank, demolition of the three buildings and associated footings on-site, and disposal or recycling of the demolition debris, drums, flat-bed trailers, and above-ground (500 gallon) tank in an approved landfill. Because the proposed remedy will remove the source of lead contamination, and because recent analyses have demonstrated the absence of any groundwater contamination, there are no requirements to construct a solid waste cover on the site. The major changes that have been made to the original remedy selected in the September 26, 1986, ROD that are reflected in this ROD Amendment are the modifications to the lead in soil

cleanup level for both on-site and off-site soils, and the extent of remediation under the new cleanup standards eliminating the need for a RCRA cover system.

V. SUMMARY OF SITE CHARACTERISTICS

During a July 17, 1996, visit to the AIM Site, representatives from the U.S. EPA, the Ohio EPA, and the U.S. Army Corps of Engineers ("USACE") observed exposed uncontrolled piles of battery casing chips and three buildings, two of which are structurally damaged to the point that they are unsafe for reuse. All three of the buildings create an attractive nuisance, particularly for children and young adults within the local community. In addition, a local farmer is using the former AIM Site office building as a storage facility for farm vehicles and implements. It is important to note that the AIM Site, although not within the City limits, is at the very edge of town. This is especially significant since 3,200 cubic yards of battery casing chips are contained within a structurally unsound building, as well as another 800 cubic yards of battery casing chips in a waste pile on-site. Although the battery casing chips are protected to some extent, at present, from rain and subsequent run-off, when the former Saw Building collapses, the potential for further release of lead into the environment will be greatly increased through migration of lead-contamination to other media (soil, groundwater, surface water via run-off, and air), aggravating existing AIM Site conditions. The foundations of all three buildings must be removed as part of the remedial action to expedite the characterization of materials in and around the foundations, which are likely to be contaminated with very high concentrations of lead from the past disposal of spent battery acid from the lead acid battery breaker operation, as well as the suspected use of the battery casing chips for "fill" material.

In addition, there is an above-ground (500 gallon) tank located on a flat-bed trailer on the AIM Site property, exposed to the elements and rusting, with contents unknown. There are, in addition, drums on the AIM Site premises, exposed to the elements and rusting, with contents unknown. There is also a UST of unknown size, content and condition buried on the AIM Site property. This UST will require removal due to its location within the area of contamination. There is documented

trespassing on-site, despite a six foot fence around the property, with unsecured gates.

Investigative information for the AIM Site indicates that the surface soil lead concentrations are above the U.S. EPA and Ohio EPA State Action Levels. These same AIM Site soils are also responsible for releases to surface water and the contamination of surrounding soils outside the AIM Site operational boundaries, as well as the sediments of Sycamore Ditch. The battery casing chips and contaminated soils are exposed and represent a continuing source of contamination at the AIM Site. The principle contaminant is lead in soil and lead in battery casings chips, as shown in the following chart:

Contaminant	Media	Average Concentration Lead (mg/kg or ppm) ¹	High Concentration Lead (mg/kg or ppm)
Lead	Soil	20,000	72,000
Lead	Battery Casing Chips	30,000	300,000

Previous groundwater investigations at the AIM Site have shown historical groundwater contamination of up to 980 ppb² lead. The 1985 Remedial Investigation detected lead in 2 of 8 residential wells and 8 of 15 ground-water monitoring wells sampled. Concentrations in three monitoring wells exceeded the interim primary drinking water standards (50 ug/l) at the time the ROD was signed. However, sampling logs indicated turbidity in these samples. The same sampling methodology was used in 1989, and lead was detected in 20 of 22 unfiltered monitoring well samples, but filtered samples taken during the same sampling event were found to be mostly non-detects, indicating that lead detections were attributable to turbidity. Unfiltered and filtered samples taken during sampling events in 1996, using low flow purging and

¹ "milligrams per kilogram" or "mg/kg" is equivalent to "parts per million" or "ppm".

² "micrograms per liter" or "ug/l" is equivalent to "parts per billion" or "ppb".

sampling methodology (not used previously) to minimize turbidity, indicated no evidence of groundwater contamination at the AIM Site.

There is currently no drinking water standard for lead, but rather a technology-based action level of 15 ppb at the tap. Although current sampling and analysis indicate that lead is not mobilizing to groundwater, continued monitoring of the groundwater and removal of the majority of the source of lead will minimize any potential future impact to the groundwater. The battery casing chips and lead-contaminated soils present not only a continuing source of lead contamination and a potential risk to human health and the environment from ingestion and inhalation of surface soils, but also a potential threat through the groundwater pathway.

VI. SUMMARY OF SITE RISKS

Exposures have occurred and continue to occur, since there is evidence of ongoing trespassing activities at the AIM Site by local residents. The greatest risk at the AIM Site is human health, with the current risk from ingestion and inhalation of lead-contaminated soils and the potential for future groundwater contamination if the source materials remain on-site. There are no apparent threatened or endangered species in the immediate vicinity of the AIM Site, but there are common flora and fauna present.

Natural recovery would not occur if no action is taken. Removal of the source material (i.e., battery casing chips and lead-contaminated soils) from the AIM Site would reduce the possibility that the source material could impact the groundwater aquifer and water supply to adjacent residences.

The potential human health and environmental effects of releases of lead-contaminated media from the site in the absence of any remedial action were estimated. The main contaminant of concern is lead because of high concentrations found in the contaminated soils and waste materials, and battery casing chips. Direct and indirect contact to environmental media contaminated by a release from the AIM Site has the potential to result in-lead exposure from the inadvertent ingestion and inhalation of soil and dust.

Receptors include humans, animals, and plants. Lead exposure in children may result in learning disabilities caused by central nervous system depression. Also, the potential exists for an increased risk of exposure of the nearby population via the migration of contaminated media by flooding.

The AIM Site is currently zoned I-1 as an industrial district within the county and will be deed-restricted for that use. The revised cleanup level for lead in soil of 1550 mg/kg, established by the U.S. EPA in consultation with the Ohio EPA, was based on a reasonably anticipated future land use as light industrial/commercial property. The cleanup value of 1550 mg/kg was determined to be protective of a developing fetus of a woman of childbearing age exposed in the workplace. The cleanup value (1550 mg/kg lead) was established by using the Adult Lead Exposure Model to calculate the soil lead concentrations at which a developing fetus of a worker exposed at the Site would have an estimated risk of no greater than 5 percent of exceeding the 10 micrograms per deciliter ("ug/dl") blood lead level of concern. In addition, an Ecological Evaluation completed by the USACE in February 1997, determined that the relatively low level of post-remedial residual ecological risk would not be unacceptable. This report is included in the Administrative Record for the Site.

VII. REASON FOR ROD AMENDMENT

The AIM Site was proposed for listing on the National Priorities List of Hazardous Waste Sites on December 30, 1982, and was made final on September 8, 1983. The Remedial Investigation Report was completed on August 9, 1985. The Feasibility Study Report was completed on July 15, 1986. The ROD was signed on September 26, 1986. The original ROD called for the following actions:

- ▶ Removal of on-site contaminated soils to 500 ppm lead. Disposal of soils in an off-site RCRA Subtitle C landfill.
- ▶ Removal of off-site soils to background lead concentrations (30 ppm); disposal of soils between background and 500 ppm on-site. Disposal of soils above 500 ppm in an off-site RCRA C landfill.

- ▶ Continued monitoring of the groundwater semi-annually for 30 years.
- ▶ Improved site drainage.
- ▶ Removal of remaining battery casings chips and disposal in a RCRA Subtitle C landfill.
- ▶ Demolition or decontamination of contaminated facilities on-site.
- ▶ Disposal of demolition debris in an off-site landfill.
- ▶ Record deed restrictions on land and aquifer use in the affected areas.

The Predesign Investigation Report was completed on March 23, 1987. The Conceptual Design was completed in April 1988. The AIM Site Investigation Report was completed in August 1989. The Pilot Plant Report and the Economic Analysis Reports were completed in June 1992.

In an effort to maintain consistency in remediating lead sites, the U.S. EPA decided to investigate cleanup levels for the AIM Site using current risk assessment methodologies. The cleanup levels in the 1986 ROD were based on Agency guidance that stipulated a range of 500 ppm to 1000 ppm for lead in soil as an appropriate cleanup level for residential areas, not the reasonably anticipated future site use as a light industrial/commercial property. The 500 ppm lead in soil cleanup level for the on-site soils does not conform to current U.S. EPA lead cleanup practices based upon lead risk assessment methodologies which were not available when the original ROD was signed.

A revised risk assessment was conducted by the U.S. EPA for on-site soils using a model developed by the U.S. EPA's Technical Review Workgroup for Lead entitled "Methodology for Assessing Risks Associated with Adult Exposures to Lead in Soil", and site-specific exposure scenarios. The Model assesses nonresidential adult risks for lead utilizing a methodology which relates soil lead intake to blood lead concentrations and is designed to develop cleanup goals which protect the developing fetus of a

site worker (woman of childbearing age) from adverse health effects of exposure to lead.³ The Model was used to estimate the soil lead concentration at which the probability of blood lead concentrations in fetuses of women exposed to environmental lead exceeding 10 ug/dl would be less than 5 percent.⁴

The revised risk assessment focused on recommending revised lead in soil cleanup levels for the former operational areas of the AIM Site that would be protective of human health. The results of this risk assessment resulted in a value of 1536 mg/kg lead in soil for a light industrial/commercial future use scenario, which was rounded to 1550 mg/kg lead in soil for the on-site cleanup level. In addition, a risk assessment for off-site soils was conducted using the Integrated Exposure Uptake Biokinetic ("IEUBK") Model for Lead in Children, Version 0.99d, to determine an appropriate cleanup value for protection of the residential child. Based on the results of this model, the requirement to clean off-site soils to the background concentration of 30 mg/kg lead in soil was changed to a risk-based value of 400 mg/kg lead in soil.

The revised cleanup values for the light industrial/commercial (1550 mg/kg lead in soil) and the residential (400 mg/kg lead in soil) future use scenarios are risk levels supported by the lead models, and are based on average (mean) values for the receptor exposure at the unit of concern. Although receptor exposure is considered to be to the average lead concentration in the unit of concern, these values are being applied as "not to exceed" values for practical reasons, such as difficulty in removing random

³ The primary basis for the algorithms in the U.S. EPA Adult Lead Model used to calculate the cleanup level is that fetuses and neonates are a highly sensitive population with respect to the adverse effects of lead on development and that 10 ug/dl is considered to be a blood lead level of concern from the standpoint of protecting the health of sensitive populations.

⁴ The U.S. EPA Technical Review Workgroup for Lead reported that the weight-of-evidence from the scientific literature suggests that delayed or impaired neurodevelopment during the first 12 months of postnatal life can be associated with maternal blood lead levels during pregnancy or neonatal blood lead levels at birth. A blood lead level of 10 ug/dL was recommended, based on the assumption that the blood lead level of concern for fetuses is the same as that for children. This position is supported in the National Research Council Committee on Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations Report (NRC 1993).

site. Groundwater would be monitored semiannually. Excavation and treatment (if necessary) of an estimated 1200 cubic yards of sediment from the Sycamore Ditch, followed by proper disposal. Improved site drainage. Removal of remaining battery casings chips and disposal in a RCRA Subtitle C landfill. Demolition of or cleaning of on-site contaminated facilities. Disposal of demolition debris in an off-site landfill. Enactment of deed restrictions on land and aquifer use in the affected areas.

The remedial design costs presented below were based upon excavation and proper disposal of the battery casing chips, excavation and proper disposal of some, but not all of the contaminated soils above 500 mg/kg lead in soil, and the placement of a cover system over contaminated soils remaining on-site.

Total Capital Costs:	\$16,600,000
O&M Costs (30 years):	\$ 700,000
Land Acquisition	\$ 2,000,000
Total Costs:	\$19,300,000

Alternative 3: Ex-Situ Treatment of Battery Casing Chips; Disposal of Stabilized Casing and Contaminated Soils at an Off-site RCRA Landfill (New ROD Alternative).

The current proposal calls for the following actions to be taken at the AIM Site: (1) removal of approximately 4,000 cubic yards of battery casing chips found both in the buildings and in a separate stockpile on the AIM Site; (2) treatment of battery casing chips either on-site, or off-site at a U.S. EPA-approved RCRA Subtitle C treatment, storage, and disposal facility ("a permitted TSD"), to meet LDRs set forth in the Ohio Administrative Code ("OAC") 3745-59-40, for a RCRA D008 waste, followed by disposal in an approved landfill; (3) demolition and removal of three buildings on the AIM Site in order to address the foundations and remove contaminated soil and suspected battery casing chips down to six feet below grade; (4) clearing the Site of all trees, and disposal of cleared trees in accordance with the Ohio EPA requirements; (5) removal and disposal or recycling of demolition debris, drums, two rusting flat-bed trailers, and one above-ground (500 gallon) tank; (6) removal of an UST due to its location within the area of

contamination; (7) investigation of sediments in Sycamore Ditch and if contaminated with lead in excess of applicable standards, removal, dewatering and placement of sediments contaminated with lead at levels less than 1550 milligrams per kilogram ("mg/kg") on the former operational area of the AIM Site; (8) removal of contaminated soils to meet a revised cleanup level of 1550 mg/kg lead in soil for soils within the former operational area of the Site (within the existing fence line), and 400 mg/kg lead in soil for soils outside the former operational area (outside the fence line); (9) excavation and disposal of soils outside the former operational area (outside the fence line) that are contaminated with lead in excess of 400 mg/kg lead in soil but less than 1550 mg/kg lead in soil (primarily to the south and east of the Site property), on the former operational area of the AIM Site; (10) excavation and disposal of approximately 28,000 cubic yards of soils and dewatered sediments contaminated with lead in excess of 1550 mg/kg that pass the toxicity characteristic leaching procedure ("TCLP") test in an approved landfill; (11) treatment of soils and dewatered sediments contaminated with lead in excess of 1550 mg/kg that fail the TCLP test, either on-site or off-site at a permitted TSDF to meet the LDRs, followed by disposal in an approved landfill; (12) backfilling the excavated areas with approximately 36,000 cubic yards of soil, assuming a 1.3 percent "fluff" rate; (13) capping the clay drain tile that runs from the AIM Site to Sycamore Ditch at the AIM Site during the implementation of the remedial action, and either establishing a new connection with the existing City of Arcanum storm water collection system, or reconnecting with existing drain tiles once remedial actions are complete; (14) maintaining and repairing the private road (Pop Rite Lane) that contractor trucks must travel over for the transportation and disposal of the battery casing chips, contaminated soils, demolition debris, as well as hauling backfill to the Site; resurfacing the private road once the remedial design/remedial action ("RD/RA") phase is complete; (15) monitoring of air, groundwater and surface waters during the RD/RA phase; (16) recording deed restrictions for the Site; and (17) maintaining site security throughout the RD/RA phases of this project.

Total Capital Costs:	\$5,425,700
O&M Costs (30 Years):	\$ 400,000
Total Costs:	\$5,825,700

IX. COMPARATIVE EVALUATION OF ALTERNATIVES

The following nine criteria are used to evaluate cleanup alternatives and provide the basis for selection of the final cleanup action at Superfund sites. The following comparison of alternatives considers the options for cleaning up the Site.

1. Overall Protection of Human Health and the Environment
{addresses whether a remedy provides adequate protection of human health and the environment and describes how risks posed through each exposure pathway are eliminated, reduced or controlled through treatment, engineering controls or institutional controls}

Alternative 1 provides for no action and would not be protective of human health and the environment. Alternative 2 would be overly-protective for the defined land use and receptor population based on the lower cleanup level of 500 mg/kg lead in soil, for soils within the former operational area of the Site, and a cleanup level of 30 ppm lead in soils (background levels) for soils outside the former operational area of the Site. However, under Alternative 2, since contaminated soils would be left in place on the AIM Site, a solid waste cap would be required in order to remove the risk pathways for both human health and the environment. It has been determined that Alternative 3 is protective of human health for the intended future use of light industrial/commercial operations.

Alternatives 2 and 3 would be equally protective of the environment because the battery casing chips would be removed from the site, treated to meet LDRs, and disposed of properly in an approved solid waste landfill. Under Alternative 2, some contaminated soils would be left on-site, but would be placed under a solid waste cap, inaccessible to environmental pathways. Under Alternative 3, all contaminated soils in excess of the cleanup levels for lead in soil, would be removed from the site and treated (if necessary) either on-site or off-site at a permitted TSDF to meet LDRs, followed by disposal in an approved solid waste landfill. Under Alternative 3, on-site soils left in place following remediation would contain less than 1550 mg/kg lead. Areas excavated to remove contaminated soils would be backfilled with clean fill and topsoil, and returned to grade.

Backfill and topsoil brought on-site would not exceed background lead concentrations, so there would be no surface soil pathway to environmental receptors. Under Alternatives 2 and 3, once remediation is complete, there would be no significant migration of lead from the on-site soils left in place. Therefore, completion of Alternatives 2 and 3 would allow for site closure.

2. Compliance with ARARs {addresses how the preferred alternatives comply with pertinent Federal and State environmental laws and/or justifies a waiver. The ARARs with which each alternative must comply are detailed in the Remedial Investigation and Pre-Design Reports.}

Alternatives 2 and 3 would comply with Federal and State ARARs by providing specific design and operating conditions that are developed from specific requirements of these ARARs. Treatment of air and wastewater would meet standards required for compliance with State and Federal ARARs.

3. Long-term Effectiveness and Permanence {refers to the ability of a remedy to maintain reliable protection of human health and the environment over time}

Alternatives 2 and 3 would provide an effective permanent solution in that the majority of the on-site contamination would be removed from the site. Both Alternatives 2 and 3 would remove the inherent hazard posed by the battery casing chips through treatment and off-site disposal. Alternative 2 would remove the direct contact threat with soils contaminated above the cleanup level of 500 mg/kg lead by excavation, treatment (if necessary) and off-site disposal of some of the contaminated soils, and placement of a solid waste cap over the remaining contaminated soils left in place. Alternative 3 would remove the direct contact threat with soils contaminated with lead above the cleanup level of 1550 mg/kg by excavation, treatment (if necessary), and off-site disposal. Areas excavated to remove contaminated soils would be backfilled with clean fill, and returned to grade. In addition, an aggressive groundwater and residential well monitoring program and, if necessary, corrective action would be required that would ensure the future protection of the aquifer.

4. **Reduction of Toxicity, Mobility, or Volume Through Treatment** {evaluates an alternative's use of treatment to reduce the harmful nature of contaminants to the environment, and the amount of contamination present}

Alternatives 2 and 3 would be effective in realizing the CERCLA statutory preference for treatment of the contaminated battery casing chips. Under Alternative 2, the mobility of contaminated soils left-in-place would be decreased through containment, not treatment. Alternative 3 would provide for reduction in toxicity and mobility of the battery casing chips and soils contaminated with lead above 1550 mg/kg lead in soil, that fail the TCLP test, through a demonstrated treatment technology.

5. **Short-term Effectiveness** {addresses the ability of alternatives to manage risks during construction and implementation phases, and reduce immediate risks posed by the hazardous materials present}

The primary short-term risk posed by Alternatives 2 and 3 would be the exposure potential created during excavation and transportation of the battery casings chips from the AIM Site to a nearby approved solid waste landfill. On-site activities (e.g., stabilization) represent minor exposure risks. The time required to complete remediation is estimated to be approximately 6 months. This is based on the: (1) stabilization and transportation of the battery casing chips to an approved solid waste landfill; (2) excavation of soils contaminated with lead above the cleanup level, and transportation to an approved solid waste landfill; and (3) capping of remaining wastes on-site that exceed the cleanup level for Alternative 2. Alternative 2 has a greater short-term risk due to the increased volume of material required for excavation and treatment, as well as construction of a solid waste cap.

6. **Implementability** {is the technical and administrative feasibility of a remedy, including the availability of goods and services needed to implement a particular option}

Both Alternatives 2 and 3 are considered to be readily implementable; the technologies used under these alternatives are well-proven. Of the alternatives considered, Alternative 3 would

be the most readily implementable.

7. **Cost** {includes estimated capital and operation and maintenance costs}

A comparison of the costs are included in the table below.

ALTERNATIVE: DESCRIPTION	COSTS
1: Original ROD Alternative AA-6	\$ 400,000
2: Original ROD Remedy AA-3	\$19,300,000
3: New ROD Remedy	\$ 5,825,700

Alternative 1 involves only the cost to monitor groundwater for 30 years, assuming a minimal number of samples analyzed for lead on a semi-annual basis. Alternatives 2 and 3 are similar actions, but are based on different cleanup criteria, and vary according to the volume of materials required to be excavated. Of the alternatives, Alternative 3 is the most cost-effective remedial action.

8. **Support Agency Acceptance** {indicates whether, based on its review of the Proposed Plan for a ROD Amendment, the support agency concurs, opposes, or has no comments on the preferred alternative}

The Ohio EPA fully accepts and supports the selected remedial action, Alternative 3, and is expected to concur with this amendment to the original ROD.

9. **Community Acceptance** {summarizes the public's general response to the alternatives described in this Proposed ROD Amendment.}

The U.S. EPA provided a public comment period on the Proposed Plan for a ROD Amendment from January 27, 1997, to February 25, 1997, and conducted a public meeting on the Proposed Plan in the Village of Arcanum, Ohio, on February 18, 1997. The community generally supports the change. No significant concerns were raised during either the public meeting or during the public

comment period. The U.S. EPA's response to the public comments received are summarized in Attachment A to this ROD Amendment.

X. SELECTED REMEDY

The U.S. EPA has selected Alternative 3 to address the remaining threats to human health and the environment at the Site. The selected alternative involves the following:

▶ Excavation, Treatment, and Disposal of Battery Casing Chips:

Approximately 4,000 cubic yards of battery casing chips will be excavated, treated to meet the LDRs applicable to non-lead acid battery, RCRA D008 wastes, and disposed of in an approved solid waste landfill.

▶ Clearing of the Site: The AIM Site will be cleared of all trees and the cleared trees will be disposed of in accordance with the OAC 3745-27-05 requirements. Trees will be cleared to as near ground level as practical, but not over six (6) inches above ground surface. The drums which have been left on-site by previous contractors will be opened and the contents of those drums will be tested for characteristic wastes, if necessary, before being disposed of in an approved solid waste landfill. The emptied drums will be cleaned, crushed, and disposed of along with the demolition debris.

▶ Demolition of Existing Structures: The former office building will be demolished to grade, along with the saw building and the remains of the smelter. The demolition debris will be transported and disposed of at an approved solid waste landfill. Any dilapidated equipment, including the two rusted out flat-bed trailers found on-site, and the 500 gallon tank will be demolished and disposed of along with the demolition debris. Recycling of materials is acceptable upon meeting the applicable RCRA requirements.

▶ Excavation and Removal of Former Office, Saw, and Smelter Buildings Foundations and Contaminated Soils: The foundations of the former Office, Saw and Smelter Buildings will be removed. Gross soils will be removed from the concrete, and the concrete disposed of at an approved solid waste landfill. Lead-contaminated soils above the cleanup level and any battery casing

chips will be excavated from below and adjacent to each building.

► UST Removal: An UST will be removed due to its location within the contaminated area, and disposed of at an approved solid waste landfill, along with associated contaminated soils, sludges, and liquids in accordance with the OAC 1301:7-9-16 requirements. The UST is located at the northwest corner of the office building.

► Pre-Excavation Confirmatory Soil Sampling: Confirmatory soil sampling will be conducted of the contaminated areas on the AIM Site prior to excavation of the soils, but after the battery casing chips have been removed. The details of this sampling, including sampling locations and analytical methods, will be set forth in approved design documents.

► Contaminated Soils: On-site soils that are contaminated with lead in excess of the cleanup level (1550 mg/kg lead in soil) will be excavated and disposed of at an approved solid waste landfill, along with any off-site soils that also exceed the 1550 mg/kg lead in soil cleanup level; off-site soils contaminated with lead in excess of 400 mg/kg, but less than 1550 mg/kg total lead in soil, will be excavated and placed on the former operational area of the AIM Site (inside the fence). Soils contaminated with lead in excess of 1550 mg/kg lead in soil that pass the TCLP test, will be disposed of at an approved solid waste landfill. Soils contaminated with lead in excess of 1550 mg/kg lead in soil that fail the TCLP test, will be treated either on-site or off-site at a permitted TSDF, to meet LDRs, followed by disposal at an approved solid waste landfill.

► Excavation Requirements: If the clay layer associated with the semi-confined aquifer at the AIM Site is penetrated during excavation activities, water might rise into the excavation. This phenomenon would be dependent on current AIM Site conditions due to seasonal weather conditions. The lead-contaminated groundwater or any water would have to be treated to meet the substantive requirements of the Clean Water Act, National Pollutant Discharge Elimination System ("NPDES") permit requirements set forth OAC 3745-33-04, the pretreatment requirements set forth at OAC 3745-36-07, or local limits set by a publicly owned treatment works, if the water was discharged off-site. Therefore, excavation activities will use engineering

controls to minimize any adverse impacts due to AIM Site geological and hydro-geological conditions. Additionally, fugitive emissions resulting from excavation activities will be controlled in accordance with OAC 3745-17-08(B).

► X-Ray Fluorescence ("XRF") Field Sampling Instrumentation: The XRF field sampling technology will be used to determine the soils that are above the cleanup level and that will be excavated and disposed of at an approved solid waste landfill. The calibration of the XRF instrument will be verified. The XRF instrument calibration standards will be analyzed as required by the manufacturer. In addition, at a minimum, a quality check of 10 percent of all XRF field measurements with off-site definitive laboratory analyses will be done, in accordance with approved design documents. If XRF field sampling instrumentation is not technically feasible or cost-effective, either off-site or mobile on-site laboratory analysis will be conducted in accordance with the approved design documents to determine soils requiring excavation and off-site disposal.

► Post-Excavation Confirmatory Soil Sampling: Post-excavation soil sampling will be conducted to confirm that all soils with lead contamination in excess of the cleanup level, have been excavated and removed from the AIM Site. Sampling and analytical requirements for determining whether the cleanup level has been met will be set forth in the approved design documents.

► Sediment in Sycamore Ditch: Samples of the sediment in the Sycamore Ditch will be taken to confirm the presence or absence of lead-contamination. If there is no evidence of lead contamination in the sediments, no further action will be necessary with respect to the sediments. However, if sampling indicates that the sediments are contaminated with lead, the values of lead in the sediment will be screened against the Ontario Sediment Quality Guidelines⁵ to determine if toxicity testing is appropriate. In addition, the National Oceanic and

⁵Persaud, D., J. Jaagumagi, and A. Hayton. 1993. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario. Ministry of Environment and Energy, Toronto. PIBS 1962. 24 pp.

Atmospheric Administration⁶ guidance will also be used. If adverse effects are apparent, the U.S. EPA, in consultation with the Ohio EPA, will use the toxicity tests results to derive a cleanup level for contaminated sediments in Sycamore Ditch. If considered necessary by the U.S. EPA, remediation of the contaminated sediments will be undertaken including, but not limited to, removal of the contaminated sediments from the Sycamore Ditch, dewatering of those sediments, and placement of the dewatered sediments contaminated with lead at levels less than 1550 mg/kg, on the former operational area of the AIM Site. The dewatered sediments that are contaminated with lead in excess of 1550 mg/kg, that pass the TCLP test, will be disposed of at an approved solid waste landfill. The dewatered sediments that are contaminated with lead in excess of 1550 mg/kg, that fail the TCLP test, will be treated to meet LDRs and disposed of at an approved solid waste landfill. Off-site or mobile on-site laboratory analyses will be used to determine the sediments that are above the cleanup level of 1550 mg/kg.

► Treatment/Disposal: Before waste materials are removed from the AIM Site, it must be determined whether or not those waste materials are contaminated by hazardous waste, and therefore, must be managed as a hazardous waste under Subtitle C of RCRA. This determination can be made either through knowledge of the composition of the waste, or by testing the waste material using the TCLP test. The TCLP test will be used at the AIM Site to determine whether or not the soils and sediments that are contaminated with lead in excess of the cleanup level of 1550 mg/kg lead in soil, are non-hazardous and should go directly to an approved solid waste landfill without any treatment, or are characteristic for lead and therefore, hazardous, and need to be treated, either on-site or off-site at a permitted TSDF, to meet LDRs. Soils and sediments contaminated with lead less than the cleanup level of 1550 mg/kg lead in soil, that are left in place at the AIM Site, would not be subject to any hazardous waste management requirements, including any testing. Contaminated soils and contaminated sediments that fail the TCLP test will be

⁶Long, E. And L. Morgan. 1990. The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program. NOAA Technical Memorandum NOS OMA 52. National Oceanic and Atmospheric Administration, Seattle.

treated to meet LDRs and pass the TCLP test, followed by disposal in an approved solid waste landfill. The soils and sediments contaminated with lead above the cleanup level, that meet LDRs and pass the TCLP test, will be disposed of at an approved solid waste landfill, without further treatment.

The battery casing chips found at the AIM Site must be stabilized to meet the LDRs for a non-lead acid battery RCRA D008 waste and pass the TCLP test, prior to disposal in an approved solid waste landfill. In practical terms, this means that the leachate produced from the stabilized material when subjected to the TCLP test, must be less than the value set forth in the LDRs for that material. If so, the stabilized battery casing chips would "pass" the TCLP and meet the LDRs, and could be transported off-site to an approved solid waste landfill for final disposal. The battery casing chips will either be treated on-site or at a permitted TSDF to meet LDRs, followed by disposal in an approved solid waste landfill. If the battery casing chips are treated off-site, the battery casing chips will be sent directly to a permitted TSDF for treatment to meet the LDRs, followed by disposal in an approved solid waste landfill. If the battery casing chips are treated on-site, each batch of the treated battery casing chips will be tested by the TCLP. The definition of a batch will be based upon the size that develops the optimum performance for the on-site treatment plant used for treatment of battery casing chips or lead-contaminated soils. Each batch that passes the TCLP test will be disposed of at an approved solid waste landfill. If a batch of treated battery casing chips fails the TCLP test, that batch will be treated until it meets the LDRs.

The decision to treat soils and sediments contaminated with lead in excess of 1550 mg/kg, that fail the TCLP test, and battery casing chips, on-site or at a permitted TSDF will be made during the RD/RA phase. Other residues will be managed in accordance with approved design documents.

► Groundwater Monitoring: In general, the Field Sampling Plan developed by the USACE for groundwater and residential well sampling shall be followed. Since the groundwater flows generally in an easterly direction toward Sycamore Ditch, and there is a residential well within less than one quarter of a

mile of the AIM Site, the action level for lead for the AIM Site shall be set at 15 ppb, which is the current technology-based action level for lead in drinking water under the Safe Drinking Water Act. The direction of groundwater flow will be established, and a minimum of four wells will be used to monitor groundwater quality and flow in the vicinity of the unit, one up-gradient, three down-gradient. Additional groundwater sampling wells may be added, if necessary, based upon the results of the groundwater flow measurements, and due to the proximity of the AIM Site to Sycamore Ditch. After background analytical data are established for the well system, the groundwater and residential well monitoring will be performed quarterly, with appropriate physical and chemical parameters measured and compared to background levels previously collected. If the data from a water sample shows a significant statistical increase or change in the parameter measured, the groundwater from the well will be resampled to verify that the changes in the data are accurate and precise. If the re-sampling event verifies a change in a measured parameter, an assessment of the release will be conducted, followed by corrective action, if necessary. The fact that the aquifer is a source of drinking water may require additional provisions which would maintain the useability of the aquifer. Other physical and chemical parameters of monitoring may be considered, along with lead, on a site-specific basis. If the only parameter sampled and analyzed for is lead, and if it is detected at an elevated level, then other parameters (metals) would be monitored for in subsequent rounds of confirmatory sampling. After the first year of testing, if no detections are made for other metals, the U.S. EPA and the Ohio EPA would re-evaluate both the frequency and the parameters for sampling. The exact details of the long-term monitoring program will be worked out during the RD/RA phase, including details of compliance monitoring, if necessary. In accordance with CERCLA and the NCP (40 C.F.R. Part 300), the U.S. EPA, in consultation with the Ohio EPA, will re-evaluate the groundwater monitoring requirements to determine if they continue to be necessary at the 5-year review. The technical groundwater monitoring requirements for this site shall be approved by the U.S. EPA, in consultation with the Ohio EPA.

► Monitoring of Surface Waters and Air: Monitoring of the surface waters and air will be performed during the remedial action.

► Access Road Restoration: The access road (Pop Rite Lane, if used) to the AIM Site will be maintained and repaired to equivalent or better condition as prior to the initiation of the AIM Site remedial actions. The private road will be used by contractor trucks to transport and dispose of the battery casing chips, contaminated soils, demolition debris, as well as to haul backfill to the Site. Once the RD/RA phase of the project is complete, the private road will be resurfaced.

► Excavation and Non-Excavation Area Backfill, Grading, Topsoil, Erosion Control, and Revegetation: In addition to erosion control and revegetation of all backfilled areas, all areas disturbed during the remedial action will be filled and graded with clean fill. The Site will be graded in such a way as to promote positive site drainage and to prevent ponding of waters on the site, once remedial actions are complete. At least six inches of suitable top soil will be placed on the entire site for revegetation. Drainage ditches, drainage swales, and erosion control methods will be implemented to prevent surface runoff from eroding the final grade and from flowing toward the adjacent properties.

► Deed Restrictions: Restrictive covenants will be executed and recorded with the Darke County Recorder. The deed restrictions filed with the Recorder of Darke County will ensure that: (1) the AIM Site is used only for light industrial/commercial operations; and (2) these restrictions run with the property.

► AIM Site Security During RD/RA Phase: The existing fence surrounding the AIM Site will be repaired and maintained throughout the RD/RA phases, to control Site access and prevent vandalism.

XI. ARARs COMPLIANCE

The substantive requirements set forth in the rules and regulations identified below are applicable or relevant and appropriate requirements ("ARARs") to the remedial action at the Site.

Clean Water Act (Ohio Authorized Program)

Direct or indirect water discharges will comply with the following:

- a. water discharge criteria pursuant to OAC 3745-33-04; and
- b. water discharge criteria pursuant to OAC 3745-36-07.

Safe Drinking Water Act (Ohio Authorized Program)

If the lead action level of 15 ppm is exceeded, corrective action shall be implemented pursuant to OAC 3745-8-80.

Clean Air Act (Ohio Authorized Program)

Fugitive air emissions resulting from response activities shall be controlled pursuant to OAC 3745-17-08(B).

Resource Conservation and Recovery Act (Ohio Authorized Program)

Response activities associated with:

- a. closure of USTs shall comply with OAC 1301:7-9-16;
- b. off-site shipments of hazardous waste shall comply with manifest requirements pursuant to OAC 3745-52-20, 22, 23, 30, 31, 32 and 33;
- c. closure of waste piles shall comply with OAC 3745-55-11; and
- d. off-site disposal of hazardous waste shall comply with land disposal treatment standards pursuant to OAC 3745-59-40.

Other Federal and State Requirements

Response activities shall comply with the following:

- a. OSHA requirements pursuant to 29 CFR 1910.120;
- b. Department of Transportation requirements pursuant to

49 CFR Part 171;

- c. Water well standards pursuant to OAC 3745-9-04 (A) (B); OAC 3745-9-05(A) (1) and (B) to (G); OAC 3745-9-06 (A), (B), (D) and (E); OAC 3745-9-07; OAC 3745-9-08; OAC 3745-9-09 (A) to (D) (1), (E) and (F); OAC 3745-9-10; and
- d. Solid waste disposal requirements pursuant to OAC 3745-27-05.

XII. STATUTORY DETERMINATION

Based on information available at this time, the U.S. EPA believes that Alternative 3 provides the best balance among the evaluation criteria. The results of the Pre-Design, Pilot Plan, Economic Analysis, the revised Risk Assessment Report, and the Ecological Evaluation, along with other technical documents found in the Administrative Record, demonstrate that the selected alternative is more easily implemented and more cost-effective than Alternative 2. The selected Alternative 3 is protective of human health and the environment, complies with Federal and State ARARs and is cost-effective. The selected remedial action utilizes permanent solutions and considered the use of alternative treatment technologies to the maximum extent practicable. This remedy addresses the statutory preference for treatment that reduces toxicity, mobility, or volume as a principal element by treating the battery casing chips, as well as soils and sediments contaminated with lead in excess of 1550 mg/kg that fail the TCLP test, to meet LDRs and pass the TCLP test. Due to the significant volume of waste at the Site, soils contaminated with lead in excess of 1550 mg/kg that pass the TCLP test will not be treated in order to remain on-site, but will be disposed of at an approved landfill. A review will be conducted to ensure that the remedy continues to provide adequate protection of human health and the environment within five years after commencement of the remedial action.

APPENDIX A - RESPONSIVENESS SUMMARY

TO THE

RECORD OF DECISION AMENDMENT

ARCANUM IRON AND METAL SUPERFUND SITE

ARCANUM, TWIN TOWNSHIP, DARKE COUNTY, OHIO

JUNE 1997

APPENDIX A - RESPONSIVENESS SUMMARY

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JUNE 1997

APPENDIX A TO THE RECORD OF DECISION AMENDMENT

RESPONSIVENESS SUMMARY RECORD OF DECISION AMENDMENT ARCANUM IRON AND METAL SUPERFUND SITE VILLAGE OF ARCANUM, TWIN TOWNSHIP, DARKE COUNTY, OHIO

PURPOSE

The responsiveness summary has been prepared to meet the requirements of Sections 113(k)(2)(B)(iv) and 117(b) of CERCLA of 1980 which requires the U.S. EPA to respond to the comments submitted, either written or oral presentations, on the proposed plan for remedial action. All comments received by the U.S. EPA during the public comment period were considered in the selection of the final remedial alternative for the AIM Site located in the Village of Arcanum, Twin Township, Darke County, Ohio.

This document summarizes written and oral comments received during the public comment period of January 27, 1997, to February 25, 1997. The comments have been paraphrased to efficiently summarize them in this document. The public meeting was held at 7:00 p.m. on February 18, 1997, in the Fire Station in Arcanum, Ohio. A full transcript of the public meeting, as well as all written comments received during the public comment period and all site related documents, are available for review at the Information Repositories at the following locations: (1) Arcanum Public Library, 101 West North Street, Arcanum, Ohio; and (2) U.S. EPA Region 5 Superfund Division, Records Center, 7th Floor, 77 West Jackson Blvd., Chicago, Illinois, 60604-3590.

OVERVIEW

The proposed remedial alternative for the AIM Site was announced to the public just prior to the beginning of the public comment period. The U.S. EPA proposed the following remedial action to be taken at the AIM Site: (1) removal of approximately 4,000 cubic yards of lead acid battery casing chips ("battery casing chips") found both in the buildings and in a separate stockpile on the AIM Site; (2) treatment of the battery casing chips either on-site, or off-site at a U.S. EPA-approved Resource Conservation and Recovery Act ("RCRA") Subtitle C treatment, storage, and disposal facility ("a permitted TSDF"), to meet the land disposal restrictions ("LDRs"), followed by disposal in an approved landfill; (3) demolition and removal of three buildings on the AIM Site in order to address the foundations and remove contaminated soil and suspected battery casing chips down to six feet below grade; (4) clearing the Site of all trees; (5) removal and disposal or recycling of demolition debris, drums, flat-bed trailers, and an above-ground (500 gallon) tank; (6) removal of an Underground Storage Tank ("UST") due to its location within the area of contamination; (7) investigation of sediments in Sycamore Ditch and if contaminated with lead in excess of applicable standards, removal, dewatering and placement of sediments

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contaminated with lead at levels less than 1550 milligrams per kilogram ("mg/kg") on the former operational area of the AIM Site; (8) removal of contaminated soils to meet a revised cleanup level of 1550 mg/kg lead in soil for soils within the former operational area of the Site (within the existing fence line), and 400 mg/kg lead in soil for soils outside the former operational area (outside the fence line); (9) disposal of soils outside the former operational area (outside the fence line) that are over 400 mg/kg lead but under 1550 mg/kg lead on the former operational area; (10) disposal of soils and sediments contaminated with lead in excess of 1550 mg/kg that pass the toxicity characteristic leaching procedure ("TCLP") test in an approved landfill; (11) treatment of soils and sediments contaminated with lead in excess of 1550 mg/kg that fail the TCLP test, either on-site or off-site at a permitted TSDF to meet the LDRs, followed by disposal in an approved landfill; (12) placement of approximately 36,000 cubic yards of soil in the excavated areas; (13) capping the clay drain tile that runs from the AIM Site to Sycamore Ditch at the AIM Site and connecting to the existing Village of Arcanum storm water collection system, or reconnecting the drain with existing drain tiles once remedial actions are complete; (14) maintaining and repairing the private road (Pop Rite Lane), if used, that contractor trucks must travel over for the transportation and disposal of the battery casing chips, contaminated soils, demolition debris, as well as hauling backfill to the Site; resurfacing the private road once the remedial design/remedial action ("RD/RA") phase is complete; (15) monitoring the groundwater, air and surface water at the Site during the RD/RA phase; (16) recording deed restrictions for the Site; and (17) maintaining site security throughout the RD/RA phases of this project.

I. Comments on the January 1997 Proposed Plan

1. **Comment:** Would it be cheaper to move the houses or buy them?

Response: The selected remedial action at the AIM Site will remove all of the sources of lead contamination in the soils, and battery casing chips, and is restricted to an approximately 4.5 acre area on Mr. Harold Shane's property. Deed restrictions will be placed on the property to prevent homes from being built on the 4.5 acre property. The local residences are not impacted by any lead-contamination, and therefore, there is no justification for extending the remediation beyond the AIM Site boundaries.

2. **Comment:** The old Hanes farm floods with water. The town knows it and must be drained before houses can be built. This is a farm along Blank Street.

Response: The selected remedial action at the AIM Site will remove all of the sources of lead contamination in the soils, and battery casing chips, and is restricted to an approximately 4.5 acre area on Mr. Harold Shane's property. Deed restrictions will be placed on the property to prevent homes from being built on the 4.5 acre property. The local residences are not impacted by any lead-contamination, and therefore, there is no justification for extending the remediation beyond the AIM Site boundaries. In addition,

as part of the selected remedial action at the Site, the clay drain tile that runs from the AIM Site to Sycamore Ditch will either be capped and a new connection with the existing Village of Arcanum storm water collection system will be established, or the existing drain tile will be reconnected with existing drain tiles once remedial actions are complete, which may improve drainage of surrounding properties.

3. Comment: It would be cheaper for you to seal off the place and pay people for their property. You could also offer to move houses for people to a new location. You could buy a piece of land to put them on.

Response: The selected remedial action at the AIM Site will remove all of the sources of lead contamination in the soils, and battery casing chips, and is restricted to an approximately 4.5 acre area on Mr. Harold Shane's property. Deed restrictions will be placed on the property to prevent homes from being built on the 4.5 acre property. The local residences are not impacted by any lead-contamination, and therefore, there is no justification for extending the remediation beyond the AIM Site boundaries.

4. Comment: I believe lots of young people would buy the houses like mine if they were sold for the purpose of removing them. Especially if sold cheap enough.

Response: The selected remedial action at the AIM Site will remove all of the sources of lead contamination in the soils, and battery casing chips, and is restricted to an approximately 4.5 acre area on Mr. Harold Shane's property. Deed restrictions will be placed on the property to prevent homes from being built on the 4.5 acre property. The local residences are not impacted by any lead-contamination, and therefore, there is no justification for extending the remediation beyond the AIM Site boundaries.

5. Comment: I was poisoned on lead one time and believe me, you don't want lead poisoning. I painted and I got lead poisoning. And I took nerve medicine for years and I had trouble with my eyes and there's nothing you can do with your eyes but just put up with it until it's out of your system. You don't want lead poisoning. Believe me on that.

Response: The U.S. EPA is very concerned about the potential for lead poisoning, and the reason for this remedial action at the AIM Site is specifically to remove the sources of lead, ensuring the protection of human health and the environment.

6. Comment: I am glad you've looked into the situation. And there are so many interested people here. I submit that long-term effectiveness and permanence is a partial solution, if not fully met; is that correct. I don't think it is fully met. I think it is partial.

Response: The U.S. EPA, in selecting the remedy, is required to evaluate all alternatives against nine criteria, which are used to evaluate cleanup alternatives and provide the basis

for selection of the final cleanup action at Superfund sites. Two of the nine criteria are Long-term Effectiveness and Permanence, which refers to the ability of a remedy to maintain reliable protection of human health and the environment over time, and Cost, which includes estimated capital and operation and maintenance costs. The U.S. EPA believes that the selected remedy will provide the best balance between all nine criteria, which are presented below:

1. **Overall Protection of Human Health and the Environment** {addresses whether a remedy provides adequate protection of human health and the environment and describes how risks posed through each exposure pathway are eliminated, reduced or controlled through treatment, engineering controls or institutional controls}
2. **Compliance with ARARs** {addresses how the preferred alternatives comply with pertinent Federal and State environmental laws and/or justifies a waiver. The ARARs with which each alternative must comply are detailed in the Remedial Investigation and Pre-Design Reports.}
3. **Long-term Effectiveness and Permanence** {refers to the ability of a remedy to maintain reliable protection of human health and the environment over time}
4. **Reduction of Toxicity, Mobility, or Volume Through Treatment** {evaluates an alternative's use of treatment to reduce the harmful nature of contaminants to the environment, and the amount of contamination present}
5. **Short-term Effectiveness** {addresses the ability of alternatives to manage risks during construction and implementation phases, and reduce immediate risks posed by the hazardous materials present}
6. **Implementability** {is the technical and administrative feasibility of a remedy, including the availability of goods and services needed to implement a particular option}
7. **Cost** {includes estimated capital and operation and maintenance costs}
8. **Support Agency Acceptance** {indicates whether, based on its review of the Proposed Plan for a ROD Amendment, the support agency concurs, opposes, or has no comments on the preferred alternative}
9. **Community Acceptance** {summarizes the public's general response to the alternatives described in this Proposed ROD Amendment.}

7. Comment: My concern is what direction the trucks will be going when hauling loads of dirt. What type of trucks? How big? Our streets in the Village of Arcanum are not like superhighways. So, will our village have a say in what or which direction trucks will be going?

Response: The U.S. EPA will work with representatives of the Village of Arcanum, Twin Township, and Darke County to ensure that the selected remedy will not cost the local community any additional funds for repair or maintenance of the streets. In general, it is the experience of the U.S. EPA that this remedial action will not significantly increase the load or vehicular traffic on the streets to the point of disrepair. In addition, the size of the trucks and vehicular patterns will be determined in conjunction with local authorities.

8. Comment: Water table in and around Arcanum is fairly high and I'm wondering if they dig too deep, water will be coming into the excavation. If so, the water will be pumped out. Filtered. Pumped to where?

Response: The U.S. EPA has already analyzed this concern in its proposed plan and selected remedy. In particular, the U.S. EPA has addressed this concern under *Excavation Requirements* in the selected remedy. Basically, if the clay layer associated with the semi-confined aquifer at the AIM Site is penetrated during excavation activities, and water rises into the excavation, any such waters would have to be treated and disposed of in accordance with the substantive requirements of the Clean Water Act, National Pollutant Discharge Elimination System ("NPDES") permit requirements, or the pretreatment requirements of a local publicly owned treatment works, if the water was discharge off-site. The Clean Water Act/NPDES requirements will ensure that the water, if any, is cleaned prior to discharge and will not pollute any other properties or waterways in the area.

9. Comment: We were notified last year that Darke County's planning on resurfacing and widening Arcanum-Ithaca Road from Ithaca to Arcanum. Now, it doesn't make sense if you guys repave, if Darke County repaves that road and you guys tear it up and repave it again. I mean if this is all going to take place, could they put a hold on that and maybe not the sections your guys are going to use? I realize that site needs to be cleaned up, but it doesn't seem right if you guys have to head south or whatever you're going to pave at.

Response: The U.S. EPA will work with representatives of the Village of Arcanum, Twin Township, and Darke County to ensure that the selected remedy will not cost the local community any additional funds for repair or maintenance of the streets. In general, it is the experience of the U.S. EPA that this remedial action will not significantly increase the load or vehicular traffic on the streets to the point of disrepair. In addition, the size of the trucks and vehicular patterns will be determined in conjunction with local authorities.

II. Comments to the U.S. EPA's February 1997 Ecological Evaluation Report

10. **General Comment:** An ecological evaluation for the AIM Site was prepared in February 1997 by United States Army Corps of Engineers, Omaha District ("USACE"), on behalf of the U.S. EPA Region 5. The ecological evaluation was subsequently distributed to the appropriate Federal and State Agencies, including the United States Department of Interior ("USDOl") by the U.S. EPA Region 5. The document addresses the following concerns:

Protectiveness of the Remedy

11. **Comment:** The EPA proposed to leave contaminated soils of the former operational area with levels of lead of up to 1,550 ppm and contamination of up to 400 ppm in soils outside that area. It is not clear from the proposed action description that this will protect migratory birds that are exposed to the site. The Department [USDOl] has requested and will evaluate available ecological risk data for potential residual threat to migratory birds and their habitats.

Response: The Ecological Evaluation addressed potential risk to representative species from contamination remaining after implementation of the preferred remedial alternative in the Proposed Plan. Potential residual risk to representative avian species evaluated in Section 7.4 of the Ecological Evaluation included the red-tailed hawk and the American woodcock.

12. **Comment:** The EPA should provide the acreage, lead levels and locations of soils below the cleanup levels. We suggest a map with isopleths in steps of 250 ppm to show the reader how site contamination will be addressed and where contamination will remain.

Response: Section 2 of the Ecological Evaluation gives a description of the 4.5 acre site and surrounding properties. Appendix B, Figure G-8, shows the Site and surrounding properties. Appendix C and Figure G-2 provide details on the ownership, acreage, and zoning of lands adjacent to the AIM Site.

Section 2 also discusses pre- and post-remedial lead concentrations. Data from the 1985 RI and 1989 Pre-Design Site Investigation was used in the Ecological Evaluation to evaluate the ecological risk to on-site and off-site areas at the AIM Site. Drawings showing site lead soil and sediment concentrations based on existing data and a conceptual site excavation plan were prepared to aid in the discussion of residual risk. See Figures G-1 through G-7. See Appendix D for a discussion of the assumptions used, Table A - 1 for a summary of existing and estimated post-remedial soil lead concentrations and Table A - 2 for raw data.

Post-Remediation vegetation and habitat

13. Comment: Contingent upon the final location, extent, and levels of lead remaining on the site the Department [USDOJ] may have additional concerns or recommendations for the grading and revegetation plans as they relate to fish and wildlife habitat.

Response: Please see Section 2 of the Ecological Evaluation for a discussion of pre- and post-remedial lead concentrations. The on-site property is currently zoned for commercial/industrial use and the most likely future land use for the property is as a commercial/industrial facility. The U.S. EPA preferred remedial alternative requires that the entire site be cleared and grubbed. Soils which are above the regional groundwater table and have lead concentrations in excess of 1550 mg/kg are to be removed. All excavated areas are to be replaced with clean backfill and topsoil. The site will be graded to promote positive drainage, and revegetated. After the remedial activities are complete, the undeveloped site will provide habitats similar to the surrounding agricultural area.

**APPENDIX B - ADMINISTRATIVE RECORD
TO THE
RECORD OF DECISION AMENDMENT**

**ARCANUM IRON AND METAL SUPERFUND SITE
ARCANUM, TWIN TOWNSHIP, DARKE COUNTY, OHIO**

JUNE 1997



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

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

SMR-7J

February 28, 1997

Ms. Shirley Norris
Arcanum Public Library
101 North Street
Arcanum, OH 45304

Subject: Arcanum Iron & Metal Site -- Update #2

Dear Ms. Norris:

Enclosed is an update to the Administrative Record file for the above noted site. Please place the documents with the preceding records.

Again, thank you for your cooperation. If you have any questions or comments, please contact me at (312)353-5821.

Sincerely,


Janet Pfundheller,
Superfund Records Manager



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U.S. EPA ADMINISTRATIVE RECORD
REMEDIAL ACTION
ARCANUM IRON AND METAL SITE
ARCANUM, OHIO
UPDATE #2
02/26/97

DOC#	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
====	====	=====	=====	=====	=====
1	02/00/97	Department of the Army, Corps of Engineers	U.S. EPA	Ecological Evaluation For The Arcanum Iron And Metal Superfund Site	69



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

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

SMR-7J

February 12, 1997

Ms. Shirley Norris
Arcanum Public Library
101 North St.
Arcanum, OH 45304

Subject: Arcanum Iron & Metal Site--Update #1

Dear Ms. Norris:

Enclosed is an update to the Administrative Record file for the above noted site. Please place the documents with the preceding records.

Again, thank you for your cooperation. If you have any questions or comments, please contact me at (312)353-5821.

Sincerely,

A handwritten signature in cursive script that reads "Janet Pfundheller".

Janet Pfundheller,
Superfund Records Manager



AR

U.S. EPA ADMINISTRATIVE RECORD
REMEDIAL ACTION
ARCANUM IRON & METAL SITE
ARCANUM, OHIO
UPDATE #1
02/11/97

DOC#	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
====	====	=====	=====	=====	=====
1	00/00/00	Hoelscher, R., U.S. EPA	Kleiman, J., U.S. EPA	Memorandum re: Regulatory Status of Batteries w/Attachments	18
2	07/00/86	U.S. EPA	Public	Fact Sheet: "Feasibility Study"	4
3	03/23/87	CH2M Hill	U.S. EPA	Predesign Report for the Selected Remedy at the Arcanum Iron & Metal Site	42
4	05/00/88	Baker/TSA, Inc.	U.S. Army Corps of Engineers/U.S. EPA	Site Sampling Plan: Pre-Design Investigations Report and Conceptual Design at the Arcanum Iron & Metal Site	77
5	08/00/89	Baker/TSA, Inc.	U.S. EPA	Site Investigation Report for the Arcanum Iron & Metal Site	231
6	08/00/91	Donohue & Associates, Inc.	U.S. EPA	Revised Community Relations Plan for the Arcanum Iron & Metal Site	32
7	06/00/92	Sverdrup Environmental	U.S. EPA	Economic Analysis Report for the United Scrap Lead and Arcanum Iron & Metal Sites	114
8	06/00/92	Sverdrup Environmental	U.S. EPA	Pilot Plan Report for the United Scrap Lead and Arcanum Iron & Metal Sites	295
9	02/26/93	Fabinski, L., USDHHS/USPHS/ATSDR	U.S. EPA/WND	Letter Forwarding Attached February 12, 1993 Revision to the September 15, 1992 Site Review and Update	26
10	03/29/96	Boseman, A., U.S. EPA	Herring, G., U.S. Army Corps of Engineers	Letter re: U.S. EPA's Request to USACE to Design a Remedial Action for the Arcanum Iron & Metal Site	1
11	04/01/96	Schenk, K., U.S. Army Corps of Engineers/Omaha District	Boseman, A., U.S. EPA	Letter re: Design of Remedy Listed in 1986 ROD with an Amended Action Level for Off Site Soil Removal	1
12	04/02/96	U.S. Army Corps of Engineers	U.S. EPA	Predesign Estimate for the Arcanum Iron & Metal Site	16
13	04/05/96	U.S. Army Corps of Engineers/Omaha District	U.S. EPA	Site Safety and Health Plan for the Arcanum Iron & Metal Site w/Cover Letter	42
14	05/27/96	Plack, D., U.S. Army Corps of Engineers	O'Grady, J., U.S. EPA	Letter Forwarding Attached Remedial Design Scope of Work for the Arcanum Iron & Metal Site w/Attachments	67

DOC# ====	DATE ====	AUTHOR =====	RECIPIENT =====	TITLE/DESCRIPTION =====	PAGES =====
15	07/22/96	O'Grady, J., U.S. EPA	Kleiman, J., U.S. EPA	Memorandum re: Classification of Chips from Lead Acid Battery Casings w/Attachments	14
16	08/08/96	Bremer, K., U.S. EPA	Garber, D., U.S. EPA/DRC	Memorandum re: RCRA Regulatory Determination for Plastic Chips from Lead Acid Battery Recycling	7
17	10/28/96	Bertino, J., U.S. Army Corps of Engineers	File	Memorandum re: Potential for Excavation to Heave at the Arcanum Iron & Metal Site	12
18	10/29/96	U.S. Army Corps of Engineers	O'Grady, J., U.S. EPA	Cost Estimates for the Arcanum Iron & Metal Site: (1) Summary of Estimated Costs for the Rapid Response Removal Action and (2) Engineer's Estimate for the Phase II Removal Action	2
19	11/01/96	OHM Remediation Services Corporation	U.S. Army Corps of Engineers/U.S. EPA	Work Plan for Removal of Lead Contaminated Soil and Battery Chips at the Arcanum Superfund Site	363
20	12/00/96	U.S. Army Corps of Engineers	U.S. EPA	Final Ground Water Sampling Technical Memorandum for the Arcanum Iron & Metal Site	199
21	01/00/97	U.S. EPA/OPA	Public	Fact Sheet: "Proposed Plan Summary for the Arcanum Iron & Metal Site"	8
22	01/00/97	U.S. EPA	Public	Fact Sheet: "Proposed Plan for Record of Decision Amendment for Final Remedial Action at Arcanum Iron & Metal Superfund Site"	18
23	01/00/97	Woodward-Clyde Consultants	U.S. Army Corps of Engineers/U.S. EPA	Technical Memorandum: Risk Assessment for the Arcanum Iron & Metal Site	99

GUIDANCE ADDENDA TO UPDATE #1 OF THE ADMINISTRATIVE RECORD

ARCANUM IRON & METAL SITE
ARCANUM, OHIO

- I. Compendium of CERCLA Response Selection Guidance Documents
- II. Guidance Addendum to Update #1 of the Administrative Record
- III. U.S. EPA/Region 5 OSWER Directive Compendium

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COMPANION OF CERCLA RESPONSE SELECTION CLAUSE DOCUMENTS

Doc No	Doc Title	Date	Author	Status	Pages	Fig	Attachments	Form #
0000	INDEX TO (CONTAINS) CERCLA RESPONSE SELECTION CLAUSE DOCUMENTS	01/01/89	OPF - FRC-ENVIRONMENTAL RESPONSE, INC	Final	8		1) DATA ELEMENTS (CONTAINED) 2) ORGANIZATION, ABBREVIATIONS AND ACRONYMS REFERENCED IN INDEX	
** Pre-Removal								
0001	EMERGENCY SITE INSPECTION REGULATIONS CLAUSE FOR FY-88	10/01/87	OSM	Final	74	2		
0002	EMERGENCY ASSESSMENT CLAUSE FISCAL YEAR 1988	01/01/88	OSM/OSD	Final	83	2		
** General Action								
1000	CERCLA REMEDIATION ACTIONS AT FEDERAL RELEASE SITES	01/23/88	LOHSE, III JOHN	Final	2	2		
1001	LISTS OF REMEDIATION ACTIONS AT IMMEDIATELY/HAZARDOUS WASTE SITES	01/01/88	RIDEL, III, ET AL /FCS ENGINEERS - ALBION, O.W. ASHL	Final	100	0		
1002	EMERGENCY RESPONSE PROCEDURES FOR LINDSAY ISLAND/ISLANDS SITES	01/01/88	BYFIELD, R W /ROCHELL INTERNATIONAL - MCCARDY, J T ASHL	Final	21	1		
1003	ENVIRONMENTAL REVIEW REQUIREMENTS FOR REMEDIAL ACTIONS	04/13/87	OSM/OSD	Final	6	2		
1004	CLAUSE ON IMPLEMENTATION OF "CONTINGENT TO REMEDIAL PERFORMANCE" PROVISION	04/06/87	OSM	Final	6	2		
1005	CLAUSE ON REMEDIATION ACTIONS INVOLVING NATIONALLY SIGNIFICANT OR PRIORITY SITES	04/03/88	LOHSE, III JOHN	Final	9	2	1) REFERENCE TO IMMEDIATE	
1006	INFORMATION ON REMEDIATION ACTION LEVELS	04/10/88	FIELD, JR, J /OSM/OSD	Final	17	2	1) REMEDIATION ACTION LEVELS 2) REMEDIATION ACTION LEVELS 3) CLAUSE FOR EMERGENCY RESPONSE TO CONTINGENCY	
1006	EMERGENCY REMEDIATION PROCEDURES, REVISION #3	01/01/88	OSM/OSD	Final	205	1		
1007	REVISION OF EMERGENCY RESPONSE ACTIONS UNDER EPCRA	04/21/87	LOHSE, III JOHN	Final	3	2		
1008	EMERGENCY RESPONSE PROCEDURES ACTIONS AT IMMEDIATELY/HAZARDOUS WASTE SITES (Previously Reference)	04/06/87	OSM/OSD	Final	9	2		
1009	EMERGENCY SITE INSPECTION REGULATIONS (Previously Reference)	10/01/87	OSM/OSD	Final	170	1		

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03/16/99

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DOC NO	DOC TITLE	DATE	AUTHOR	STATUS	PAGES	FIGS	ATTACHMENTS	VERSION NUMBER
** RI/IS - General								
2002	2 CASE SERIES 1-23 REMEDIAL RESPONSE AT HAZARDOUS WASTE SITES	03/01/94	UNDOCT/AMER - CERCLA/CER	Final	670	1		1994 03/01 00 0000
2003	3 EPA GUIDE FOR MINIMIZING THE ADVERSE ENVIRONMENTAL EFFECTS OF CLEAN UP UNIDENTIFIED HAZARDOUS WASTE SITES	06/01/95	ENVIRONMENTAL RESEARCH LABORATORY	Final	150	2		1995 06/01 00 0000
2003	3 GUIDANCE FOR FUNCTIONAL REMEDIAL OPERATIONS AND RESPONSIBILITY SCHEDULE UNDER CERCLA	10/01/98	UNDOCT/AMER	Final	300	1		1998 10/01 00 0000
2003	3 JOHN DOE/EPA GUIDANCE	06/30/93	CERCLA/PAS	Final	42	2		1993 06/30 00 0000
2004	4 MODELING REMEDIAL ACTIONS AT UNIDENTIFIED HAZARDOUS WASTE SITES (NO. 1-19)	04/01/95	BOLWELL, S.M. ET AL /NORFOLK/UNIVERS AND ILL - UNDOCT/AMER - AMER, D.C. AND BULWELL, JR. - D.C. AMER	Final	320	1		1995 04/01 00 0000
2005	4 PRELIMINARY INVESTIGATION AND REMEDIAL OPERATIONS FOR CERCLA SITES (NO. 1-19)	04/01/95	GEORGE, JR., W.M. AMER - GEORGE, C. AMER	Final	9	2		1995 04/01 00 0000
2006	4 REMEDIAL DESIGN AT HAZARDOUS WASTE SITES - SUMMARY REPORT	01/01/99	CERCLA/AMER	Final	95	1		1999 01/01 00 0000
2007	4 REVISED PROCEDURES FOR IMPROVING (RI) SITE RESPONSE ACTIONS	11/13/97	FORNIE, J.W. AMER	Final	20	2		1997 11/13 00 0000
2008	4 RI/IS IMPROVEMENTS	07/23/97	LOCHES, III AMER	Final	11	2	1) RI/IS IMPROVEMENTS	1997 07/23 00 0000
2009	4 RI/IS IMPROVEMENTS (RI/IS)	04/25/98	LOCHES, III AMER	Final	16	2	2) REMEDIAL INFORMATION THROUGH ACTIVITIES	1998 04/25 00 0000
2010	4 SUPERFUND FEDERAL LEAD REMEDIAL PROJECT IMPLEMENTATION GUIDE	12/01/96	CERCLA	Draft	170	1		1996 12/01 00 0000
2011	5 SUPERFUND REMEDIAL DESIGN AND REMEDIAL ACTION GUIDANCE	06/01/96	CERCLA	Final	100	1		1996 06/01 00 0000
2012	5 SUPERFUND STATE LEAD REMEDIAL PROJECT IMPLEMENTATION GUIDE	12/01/96	CERCLA	Final	130	1		1996 12/01 00 0000
** RI/IS - RI into Quality/Site & Waste Assessment								
2013	5 A GUIDANCE TO SUPERFUND FIELD OPERATIONS MANUAL	12/01/97	CERCLA - UNDOCT/AMER	Final	350	1		1997 12/01 00 0000
2014	6 DATA QUALITY OBJECTIVES FOR REMEDIAL RESPONSE ACTIVITIES (ENVIRONMENTAL PROTECTION)	03/01/97	CERCLA FEDERAL PROGRAM GROUP - CERCLA/AMER	Final	150	1		1997 03/01 00 0000

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COMPILING OF CERCLA RESPONSE SECTION GRANTS LOGS

LN	NO	WD	TITLE	Date	Author	Status	Pages	Item	Attachment	Comments
	2102	6	DATA QUALITY INDICATORS FOR REMEDIAL RESPONSE ACTIVITIES SAMPLE SCENARIO RISK'S ACTIVITIES AT A SITE BY CONTAMINATED SOILS AND GROUNDWATER	02/01/97	ENV FEDERAL REGULATIONS GROUP - TERRACCI	Final	120	1		
	2103	6	REMEDIATION ACTIVITIES IN WATERSHED WASTE REACTIVITY TESTING PHASES	01/01/94	REMEDI. CO. ET AL /MIRIN (TRP - BULLY, M/WR	Final	150	1		
	2104	6	FIELD TESTING FOR ORGANIC CONTAMINANTS IN SAMPLES FROM WATERSHED WASTE SITES	04/07/96	RETRON, M.R. ET AL AEA GROUP - ORTH, A AMERICAN DEPT OF ENERGY RESEARCH - BONS, T /SPA	Final	11	2	1) NAME FIELD TESTING FOR ORGANIC CONTAMINANTS	
	2105	6	FIELD TESTING: WETLANDS CANALS' LEAK'S CLAY	07/01/96	- ORRARD	Final	00	1		
	2106	6	FIELD STANDARD OPERATING PROCEDURES MANUAL ON-SITE SURV	01/01/95	- ORRARD	Final	20	2		
	2107	7	FIELD STANDARD OPERATING PROCEDURES MANUAL ON-SITE SURV	01/01/95	- ORRARD	Final	10	2		
	2108	7	FIELD STANDARD OPERATING PROCEDURES MANUAL ON AIR SURVEILLANCE	01/01/95	- ORRARD	Final	20	2		
	2109	7	FIELD STANDARD OPERATING PROCEDURES MANUAL ON-SITE SAFETY PLAN	01/01/95	- ORRARD	Final	20	2	1) SAMPLE SITE SAFETY PLAN FOR THE SAFETY PLAN 2) EMERGENCY CONTAMINATION CONTROL PLAN 3) EMERGENCY SAFETY CHECK LIST	
	2110	7	TECHNICAL MANUAL FOR TESTING WATERSHED SITES	07/01/94	IRISHING, I.M. ET AL AEA GEOLOGICAL SURVEY - WOLF, J /JSA	Final	211	1		
	2111	7	TECHNICAL MANUALS FOR TESTING WATERSHED SITES AND WASTE INCINERATION	01/01/94	REMEDI. R.C. ET AL /WORLD, INC. - WOLF, J /JSA	Final	220	1		
	2112	6	TRAINING AND SPECIFICATIONS FOR PREPARING: QUALITY ASSURANCE PROGRAM DOCUMENTATION	01/01/97	- QUALITY ASSURANCE HANDBOOK STAFF	Final	11	2	1) NAME QUALITY ASSURANCE PROGRAM DOCUMENTATION 01/10/97	
	2113	6	LABORATORY DATA VERIFICATION PROCEDURES GUIDELINES FOR WATERSHED WATERSHED ANALYSIS	07/01/96	SPA DATA REVIEW WORK GROUP - REYER, B /VIAI AND CO /SPATY AND EDICE - ISID	Final	20	2		
	2114	6	LABORATORY DATA VERIFICATION PROCEDURES GUIDELINES FOR WATERSHED WATERSHED ANALYSIS	07/01/96	REYER, B /VIAI AND CO /SPATY AND OFFICE - SPA DATA REVIEW WORKGROUP - ISID	Final	45	2		

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ISB NO	ISB TITLE	Date	Author	Status	Pages	Year	Attachments	Inventory Number
2118	8 PRACTICAL GUIDE FOR GROUND-WATER SAMPLING	06/01/85	BROCKTON, M J., ET AL / ILLINOIS ST WATER SURVEY - SCHAF, M R / JOHNSON	Final	175	1		117A 0017 05 100
2119A	8 SOLIDWATER SAMPLING QUALITY ASSURANCE USER'S GUIDE	07/01/85	BARTH, D S & STARKS, I S / UNIV OF NEV, LAS VEGAS - BROWN, R W / EARTH	Final	130	1		117A 0017 05 100
2119B	8 SOIL SAMPLING QUALITY ASSURANCE USER'S GUIDE	05/01/84	BARTH, D S & WARD, S J / UNIV OF NEVADA, LAS VEGAS - BROWN, R W / JOHNSON	Final	100	1		117A 0017 05 100
2118	9- TEST METHODS FOR EVALUATING SOIL AND WASTE, LABORATORY MANUAL PHYSICAL/CHEMICAL METHODS, THIRD EDITION (VOLUMES 1A, 1B, 1C, AND 1D)	11/01/80	OTHER	Final	3000	1		
2119	11 USER'S GUIDE TO THE CONTRACT LABORATORY PROGRAM	12/01/80	CERCLA/SLP SAMPLE INVOLVEMENT OFFICE	Final	220	2		117A 0017 05 100
**	81/75 - LAND DISPOSAL FACILITY TECHNOLOGY							
2200	12 GUIDANCE FOR LANDFILLING HAZARDOUS WASTE SITES	09/01/85	BEAVER, C C, ET AL / U.S. GEOL SURV - CLARKSON, J M / AMER	Final	475	2		117A 0017 05 100
2201	13 DESIGN, CONSTRUCTION, AND EVALUATION OF GAY LINES FOR WASTE INCINERATION FACILITIES	11/01/80	COLEMAN, J L, ET AL / AMER - ROBERTS, M M / AMER	Final	300	2		117A 0017 05 100
2202	13 EVALUATING COVER SYSTEMS FOR SOIL AND HAZARDOUS WASTE	09/01/83	LUTTON, R J / U.S. GEOL SURV - LAURENCE, R E / AMER	Final	90	2		117A 0017 05 100
2203	13 GUIDANCE MANUAL FOR MINIMIZING POLLUTION FROM WASTE DISPOSAL SITES	05/01/78	COLMAN, A L, ET AL / A W MARTIN ASSOCIATES, INC - SPOONER, D E / AMER	Final	83	1		117A 0017 05 100
2204	13 LANDFILLING INSTRUCTIONS	08/11/87	LOCHIST, D L / AMER - LUCERO, G / AMER	Final	23	2	1) EMERGENCY RESPONSE PROCEDURES, CALIFORNIA (1ST EDITION) 2) OTHER ATTACHES CITED ARE AVAILABLE IN	

-MOD-
COMPILING OF CERCLA RESPONSE SELECTION GRADE DOCUMENTS

TRK NO VOL TITLE	Date	AUTHORS	Status	Pages	Fier	Attachments	INDEXING NUMBER
2301 16 GREEN REVOLUTION ISOTHERMS FOR HUNG ORGANICS	04/01/88	- LITTON, D A /AERI - COHEN, J M /AERI	Final	321	2		1374-0001-01-001
2302 17 ENGINEERING HANDBOOK FOR HAZARDOUS WASTE INCINERATION	09/01/81	- EDWARDS, T.A., ET AL /AD-84-80 - RISHARDI CORP. - CRACKER, D A /CEE	Final	445	2		1374-0001-01-005
2303 17 EPA GUIDE FOR IDENTIFYING CLEANUP ALTERNATIVES AT HAZARDOUS WASTE SITES AND SPILLS: BIOLOGICAL TREATMENT	-	- PACIFIC NORTHWEST LABORATORY - RABALA, L C /CORWALLIS ENVIRONMENTAL RESEARCH LAB	Final	120	2		1374-0001-01-001
2304 17 EPA GUIDE FOR HAZARDOUS WASTE MANAGEMENT	05/01/86	- CONRADSON	Final	75	2		1374-0001-01-002
2305 17 GUIDANCE SYSTEMS FOR CLEANUP OF BURIED HAZARDOUS SITES	06/01/86	- CONRADSON-CONWAY / WISCONSIN - BARRI, E /AERI	Final	70	1		1374-0001-01-006
2306 17 GUIDANCE SYSTEMS FOR CLEANUP OF BURIED HAZARDOUS SITES	05/20/85	- CONRADSON-CONWAY / WISCONSIN C - JOHNSON - BARRI, E. AND BILNER, D /AERI	Final	115	1		1374-0001-01-005
2307 18 HANDBOOK FOR EVALUATING REMEDIAL ACTION TECHNOLOGY PLANS	06/01/83	- BRIDGEMAN, J AND BASS, J /AERI D - LITTLE INC - PERIN, J B /AERI	Final	430	1		1374-0001-01-006
2308 18 HANDBOOK FOR STABILIZATION/STABILIZATION OF HAZARDOUS WASTE	06/01/86	- CLAYTON, R. M. ET AL /A/S - DEWALS - CLAYTON, J B /ADAMER	Final	125	1		1374-0001-01-001
2309 18 HANDBOOK REMEDIAL ACTION AT WASTE DISPOSAL SITES (REVISED)	10/01/85	- CONRADSON - CONRADSON	Final	300	1		1374-0001-01-006
2310 20 TREATMENT PLANT MANAGEMENT	11/01/85	- RIFE, E AND RUS, C /PER ASSOCIATES - BARKLEY, M /EPA	Final	300	1		1374-0001-01-006
2311 20 WASTE TREATMENT TECHNOLOGIES FOR SYNTHETIC WASTES	09/01/86	- CMP, CRISLER, AND MERRE INC - OLSEN, S D /AERI	Final	130	1		1374-0001-01-001
2312 21 PRACTICAL OPERATIONAL GUIDE FOR HAZARDOUS WASTE INCINERATORS	04/01/86	- CONWAY, P. ET AL /ADAMER RESEARCH INSTITUTE - CRACKER, D A /AERI	Final	63	2		1374-0001-01-001
2313 21 PRACTICAL OPERATIONAL GUIDE FOR HAZARDOUS WASTE INCINERATORS. PROJECT SUMMARY	07/01/86	- CONWAY, P. ET AL /ADAMER RESEARCH INSTITUTE - CRACKER, D A /AERI	Final	2	1		1374-0001-01-001

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COMPENDIUM OF CERCLA RESPONSE SELECTION GRANTS DOCUMENTS

Doc No	Title	Author	Status	Pages	File	Attachments	Implementation
2310	21 PROTECTION OF RE PLACEMENT OF SLURRY (LANDFILLABLE WASTE IN LANDFILLS-STARBUCK INTERMEDIATE CLAUCE)	06/11/96 - OPERATOR	Final	35	1	1) READ RE SAME SUBJECT FROM WILLIAM M I KIRBY	12/28/96 04/01/97
2315	21 REVIEW OF IN-PLACE TREATMENT TECHNOLOGIES FOR CONTAMINATED SURFACE SOILS-VOL 2 BACKGROUND INFORMATION FOR IN-SITU TREATMENT	11/01/94 - SHS, R C, ET AL /PUB ASSOCIATES - BULLIVY, M /PUB	Final	250	1		12/28/96 04/01/97
2316	21 REVIEW OF IN-PLACE TREATMENT TECHNOLOGIES FOR CONTAMINATED SURFACE SOILS-VOL 1 TECHNICAL EVALUATION	09/19/94 - OPERATOR	Final	165	1		12/28/96 04/01/97
2317	22 SLURRY WALLS: CONSTRUCTION FOR FRESHWATER GROUNDWATER	02/01/94 - OPERATOR	Final	220	1		12/28/96 04/01/97
2318	22 SYSTEMS TO ACCELERATE IN-SITU STABILIZATION OF WASTE DEPOSITS	09/01/96 - WILLARD, M, ET AL /DOWHERRE CO - OLSE, W /PUB	Final	205	1		12/28/96 04/01/97
2320	22 REMEDIATION DESIGN BRIEFS ALTERNATIVES TO LANDFILLABLE WASTE LANDFILLS	07/01/96 - OPERATOR	Final	35	2		12/28/96 04/01/97
** 21/25 - Ground Water Monitoring & Protection							
2400	23 CRITERIA FOR IDENTIFYING AREAS OF UNSTABLE FRESHWATER UNDER GROUND STARBUCK INTERMEDIATE CLAUCE	07/01/96 - OPERATOR	Final	950	2		12/28/96 04/01/97
2401	24 FROM GROUNDWATER MONITORING (UNSATURATED ZONE) TO GROUNDWATER MONITORING (SATURATED ZONE)	12/10/96 - LINDRO, G A /PUB	Final	95	2	1) RELATIONSHIP TO GROUNDWATER MONITORING TO GROUNDWATER MONITORING	12/28/96 04/01/97
2402	24 GROUND-WATER MONITORING AT CLEAN-UP SITES: SURFACE INFORMATION AND WASH PILE LOTS	03/21/96 - FURTH, J W /PUB	Final	3	2		12/28/96 04/01/97
2403	24 GROUND-WATER PROTECTION STRATEGY	06/01/94 - OFFICE OF GROUND-WATER PROTECTION	Final	60	2		12/28/96 04/01/97
2404	24 CRITERIA FOR GROUND-WATER CLASSIFICATION UNDER DE SPA GROUND-WATER PROTECTION STRATEGY	12/01/96 - OFFICE OF GROUND-WATER PROTECTION	Final	600	2		12/28/96 04/01/97
2405	24 OPERATION AND MAINTENANCE INSPECTION CHECKLISTS FOR GROUND-WATER MONITORING SYSTEMS	01/28/96 - OPERATOR/CERCLA ENFORCEMENT DIVISION	Final	80	2	1) READ RE SAME SUBJECT FROM WILLIAM M I KIRBY	12/28/96 04/01/97

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COMPILATION OF CERCLA RESPONSE SELECTION CLAUSE CODES

LINE NO	LINE TITLE	DATE	AUTHOR	STATUS	PAGES	FILE	ATTACHMENTS	APPLICABLE PARTS
1406	24 HOURS FOR GROUND-WATER EVALUATION	07/01/86	HAZARDOUS WASTE GROUND WATER TASK FORCE	Final	300	2		1406 0001 1.1
1407	25 RRA GROUND-WATER MONITORING TECHNICAL GUIDANCE CLAUSE CODES (TKD)	07/01/86	EPA	Final	370	2		1407 0001 1
1408	25 RRA GROUND-WATER MONITORING TECHNICAL GUIDANCE CLAUSE CODES, TCD INCLUSIVE SUMMARY	07/01/87	LEUNG, C A JOPE	Final	0	1		1408 0001 1.0
** MARK								
1409	25 APPLICABILITY OF RRA MONITORING TECHNICAL REQUIREMENTS RESPECTING LINES AND LEAKAGE COLLECTION SYSTEMS	04/01/85	SMITH, J JOPE	Final	3	2		1409 0001 1.1
1410	25 CERCLA COMPLIANCE MONITORING ENVIRONMENTAL STATUTES	10/02/85	FORNER, J W JOPE	Final	10	1	1) POTENTIALLY APPLICABLE TO ALL RRA AND APPROPRIATE REGULATIONS	1410 0010 1.1
1411	25 CERCLA COMPLIANCE MONITORING LMS MANUAL	05/05/86	CEM	Draft	245	2		1411 0010 1.00
1412	25 EPA'S IMPLEMENTATION OF THE SUPERFUND MONITORING AND CHARACTERIZATION ACT OF 1980	05/21/87	WONG, L M JOPE	Final	4	2		1412 0010 1.00
1413	25 GUIDANCE MANUAL ON THE RRA REQUIREMENTS FOR MONITORING WELLS	01/01/86	INDUSTRIAL ECONOMICS, INC. - CEM	Final	350	2		1413 0010 1.0
1414	25 MONITORING REQUIREMENTS FOR MONITORING SITES AND ON-SITE MONITORING OF WASTE AND TREATMENT WELLS	01/27/86	FORNER, J W JOPE	Final	0	2	1) (REVISION) WASTEWATER MONITORING BY RRA ACTION	1414 0010 1.1
1415	25 CRITERIA FOR IDENTIFYING AREAS OF VOLATILE INTRUSION WITH RRA STATUTORY MONITORING CLAUSE (Secondary Reference)	07/01/86	CEM/JOPE	Final	010	2		1415 0010 1.1
1416	24 FINAL RRA COMPLIANCE GROUND-WATER MONITORING (EVALUATION AND CLAUSE) (Secondary Reference)	11/19/86	LEUNG, C A JOPE	Final	55	2	1) RELATIONSHIP TO TECHNICAL REQUIREMENTS TO GROUND WATER MONITORING STATUTES	1416 0010 1
1417	24 STRAIN AND BARRIERS INSPECTION (LMS RRA GROUND-WATER MONITORING SYSTEM) (Secondary Reference)	01/07/86	CONRAD/CEM/INDUSTRIAL ECONOMICS DIVISION	Final	50	2	1) SUPERFUND MONITORING WELLS	1417 0010 1
1418	25 RRA GROUND-WATER MONITORING TECHNICAL GUIDANCE CLAUSE CODES (TKD) (Secondary Reference)	07/01/86	EPA	Final	370	2		1418 0001 1
1419	25 RRA GROUND-WATER MONITORING TECHNICAL GUIDANCE CLAUSE CODES, TCD INCLUSIVE SUMMARY (Secondary Reference)	07/01/87	LEUNG, C A JOPE	Final	0	1		1419 0001 1.0

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2700	15 GARA (LADOLE LCLLHM 147711) DESIGN LHM SYSTEM AND FMM COVER (Secondary Reference)	07/01/87	- EPA	Final	30	2		
9001	33 GARA/CERCLA DECISION AND OR REMEDY SELECTION (Secondary Reference)	06/24/85	- KILPATRICK, A COMPLIANCE BRANCH, EPA	Final	3	2		
** Water Quality								
9000	26 ALTERNATE CONCENTRATION LIMIT GUIDANCE PART 1, ACT POLICY AND INFORMATION REQUIREMENTS	07/01/87	- CERCLA	Final	124	2		
4001	26 GUIDANCE COLLAGES FOR PROVIDING ALTERNATE WATER SUPPLIES	07/01/88	- CERCLA	Final	64	2		
4002	26 INTERIM FINAL GUIDANCE ON CRITICAL ACTION LEVELS AT CONTAMINATED DRINKING WATER SITES	10/06/87	- CERCLA/CER	Final	9	2		
4003	26 QUANTITY CRITERIA FOR WATER 1986	05/01/87	- OFFICE OF WATER REGULATIONS AND STANDARDS	Final	325	2		
2701	16 CERCLA ACCEPTANCE CRITERIA FOR RISC (CERCLA) (Secondary Reference)	04/01/88	- CERCLA, B. A. ALERI - CERCLA, J. B. ALERI	Final	321	2		
9005	1 INFORMATION ON INTERIM WATER ACTION LEVELS (Secondary Reference)	04/10/88	- FIELDS, J. J. / CERCLA/CER	Final	17	2		1) NAME OF THE SITE 2) NAME OF THE STATE 3) CLASSIFICATION OF THE SITE
** Risk Assessment								
3000	27 ASER HEALTH ASSESSMENTS ON MWL SITES	06/16/88	- DEPT OF HEALTH AND HUMAN SERVICES/ATER	Final	14	2		
3001	27 CHEMICAL, PHYSICAL & BIOLOGICAL PROPERTIES OF COMPOUNDS PRESENT AT HAZARDOUS WASTE SITES	09/27/85	- CHEMICAL ASSOCIATES, INC	Final	320	2		
3002	27 FINAL GUIDANCE FOR THE COORDINATION OF ASER HEALTH ASSESSMENT ACTIVITIES WITH THE SUPERFUND REMEDIAL PROGRAM	05/14/87	- FORSTER, J. W. / CERCLA/CER - ASER	Final	23	2		1) SAME TITLE (DATE) 4/27/88
3003	27 GUIDELINES FOR CERCLA RISK ASSESSMENT (FEDERAL REGISTER, SEPTEMBER 24, 1986, P. 33993)	09/24/86	- EPA	Final	13	2		

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CLX NO	CLX TITLE	DATE	AUTHORS	STATUS	PAGES	FILE	ASSIGNMENTS	ORCA/ROCA NUMBER
3010	31 INTERIM POLICY FOR ASSESSING RISKS OF "DANGERS" OTHER THAN 2,3,7,8-PCDD	01/07/87	ROMA, L B /SPA	Final	30	2	31 INTERIM PROBLEMS FOR ESTIMATING RISKS ASSOCIATED WITH ENVIRONMENTAL HAZARDOUS 10/86	
3011	31 PUBLIC ITEM BY RISK (WEAITHIN DATABASE (PRINT) (LEAD'S MODEL AND TWO PROBLEMS CONTAINING THE (DANGERS) FILE SYSTEM ARE INCLUDED)	01/16/88	ORCA/ROCA'S INTEGRATION BRANCH	Final	-	2		
3012	31 ROLE OF ADULT TOXICITY BIOASSAYS IN THE GENERAL ACTION PROCESS AT INDUSTRIAL WASTE SITES	08/01/87	ABRY, L A, ET AL /PACIFIC NORTHWEST LABORATORY - MILLER, W E /ADVISORY ENVIRONMENTAL RESEARCH LAB	Final	100	2		11/4/87/8 07 1000
3013	31 SUPERFUND (PUBLIC) ASSESSMENT MODEL	04/01/88	ORCA	Final	100	1		10/28/88 07 1000
3014	31 SUPERFUND PUBLIC ITEM BY EVALUATION MODEL	10/01/88	ORCA - ORCA	Final	300	1		10/28/88 07 1000
3015	31 RISK OF IMPACT	08/01/85	LIFE SYSTEMS, INC - THURSON, T E /ORCA	Final	120	2		11/28/88 07 1000
3016	31 IMPROVEMENT ASSESSMENT CLAUSE (Secondary Reference)	11/22/85	FORNER, J W /ORCA	Final	11	2		10/28/88 07 1000
** (1st) Analysis								
3017	31 RISK ACTION LISTING: PRECISE'S MODEL	10/01/87	JOB ASSOCIATES/OHIO STATE - ORCA/ROCA - ORCA/ROCA	Final	30	1		
3018	31 RISK ACTION LISTING: PRECISE'S MODEL	04/01/88	ORCA/ROCA	Final	170	1		10/28/88 07 1000
3019	31 ENVIRONMENTAL REVIEW REQUIREMENTS FOR RISKY ACTS (Secondary Reference)	04/13/87	ORCA/ROCA	Final	6	2		10/28/88 07 1000
** Community Relation								
3020	31 COMMUNITY RELATIONS IN SUPERFUND: A HANDBOOK (INTERIM VERSION)	06/01/88	ORCA	Final	100	2	31 ORCA 6 (2) 88 (1) 111 10/28/88	10/28/88 07 1000

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0000	00 GOVERNMENT ASSIGNMENT CLARIFICATION	11/22/85	FORSTER, J W JONES	Final	11	2		INFORM 0000 11
0001	00 MEDIA CLARIFICATION ON POTENTIALLY RESPONSIBLE PARTY PARTICIPATION IN REMEDIAL INVESTIGATIONS AND FEASIBILITY STUDIES	05/16/86	FORSTER, J W JONES	Final	37	2		INFORM 0001 11
** Selection of Remedial Action Documents								
0000	00 MEDIA CLARIFICATION ON DELETED SECTION OF REMEDIAL ACTION PLAN	12/24/86	FORSTER, J W JONES	Final	10	2		INFORM 0000 11
0001	00 REMEDIAL ACTION PLAN DELETED SECTION OF REMEDIAL ACTION PLAN	06/24/87	KILPATRICK, B COMPLIANCE BRANCH, (DPT)	Final	3	2		INFORM 0001 11

GUIDANCE ADDENDUM TO UPDATE #1
 DOCUMENTS MAY BE VIEWED AT
 U.S. EPA REGION 5
 77 W. JACKSON BLVD.
 CHICAGO, IL 60604-3590
 02/11/97

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1	00/00/00	Chaney, R., USDA; et al.		"The Potential for Heavy Metal Exposure From Urban Gardens and Soils" (USDA/Agricultural Research Service)	46
2	00/00/00	Lutz, P., et al.		Abstract: "Immunity in Children With Exposure to Environmental Lead: I. Effects on Cell Numbers and Cell-Mediated Immunity" (DRAFT)	21
3	00/00/00	Angle, C.		Abstract: "Kinetics of Childhood Lead: The Omaha Duplicate Diet Study"	5
4	00/00/00	Various		Abstracts From "Medicine/Lead" (Listing of Lead Studies)	10
5	00/00/00	Bornschein, R., et al.		Article: "Soil Lead Blood Lead Relationship in a Former Lead Mining Town"	12
6	00/00/00	Watt, T., et al.		Excerpt from Journal Article: "Lead Contamination of U.K. Dusts and Soils and Implications for Childhood Exposure: An Overview of the Work of the Environmental Geochemistry Research Group" (Imperial College of London)	1
7	00/00/00			Excerpt: "Lead and Compounds" (Integrated Risk Information System)	10
8	00/00/00	Maddaloni, M., et al.		Paper: "Bioavailability of Soil Borne Lead in Adults by Stable Isotope Dilution"	17
9	00/00/00	Bornschein, R.		Paper: "Neurobehavioral Effect of Lead: A Summary Review of Cross Sectional and Longitudinal Studies"	15
10	00/00/00	Rock, S., U.S. EPA/NRMRL	U.S. EPA	Paper: "Phytoremediation"	11
11	00/00/00	National Academy of Sciences		Publication: "Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations" (National Academy Press)	0
12	00/00/00	USDC/NOAA		Technical Memorandum: "The Potential for Biological Effects of Sediment Sorbed Contaminants Tested in the National Status and Trends Program" (NOS OMA 52)	235

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13	00/0091	Mushak, F.		Monograph: "Gastro-Intestinal Absorption of Lead in Children and Adults: Overview of Biological Biophysicochemical Aspects (Chemical Species and Bioavailability)"	17
14	05/00/61	Kehoe, R.		Lecture: "The Metabolism of Lead in Man in Health and Disease" (Harbin Lectures: 1960)	21
15	05/00/74	Rosen, J., et al.		Journal Article: "Significance of Plasma Lead Levels in Normal and Lead Intoxicated Children (Environmental Health Perspectives)"	6
16	00/00/75	Barry, P.		Journal Article: "A Comparison of Concentrations of Lead in Human Tissues" (British Journal of Industrial Medicine)	22
17	01/00/76	Barry, P.		Journal Article: "Complete Set of Data in Support of "A Comparison of Concentrations of Lead in Human Tissues" (British Journal of Industrial Medicine)"	35
18	00/00/77	Barry, P., et al.		Journal Article: "Lead Concentrations in Human Tissues" (British Journal of Industrial Medicine)	13
19	08/00/77	Yankel, A., et al.		Journal Article: "The Silver Valley Lead Study: The Relationship Between Childhood Blood Lead Levels and Environmental Exposure (Journal of the Air Pollution Control Association)"	5
20	08/00/77	Damstra, T.		Journal Article: "Toxicological Properties of Lead" (Environmental Health Perspectives)	11
21	00/00/78	Ziegler, E., et al.		Journal Article: "Absorption and Retention of Lead by Infants" (Pediat. Res.)	6
22	00/00/79	Barltrop, D., et al.		Journal Article: "Effect of Particle Size on Lead Absorption" (Arch. Environ. Health)	5
23	00/00/80	Keller, C. and R. Doherty		Journal Article: "Bone Lead Mobilization in Lactating Mice and Lead Transfer to Suckling Offspring" (Toxicology and Applied Pharmacology)	9
24	04/00/80	Needleman, H.		Journal Article: "Lead Exposure and Human Health: Recent Data on an Ancient Problem (Technology Review)"	4

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25	00/00/81	Barry, P.		Journal Article: "Additional Set of Data in Support of 'Concentrations of Lead in the Tissue of Children'" (British Journal of Industrial Medicine)	8
26	00/00/81	Barry, P.		Journal Article: "Concentrations of Lead in the Tissues of Children" (British Journal of Industrial Medicine)	11
27	00/00/81	Needleman, H., et al.		Journal Article: "The Health Effects of Low Level Exposure to Lead" (Annual Review of Public Health)	20
28	00/00/82	Needleman, H.		Journal Article: "The Neurobehavioral Consequences of Low Lead Exposure in Childhood" (Neurobehavioral Toxicology and Teratology)	4
29	00/00/82	Stark, A., et al.		Journal Article: "The Relationship of Environmental Lead to Blood Lead Levels in Children (Environmental Research)	12
30	09/02/82	Mahaffey, K., et al.		Journal Article: "National Estimates of Blood Lead Levels: United States, 1976-1980" (New England Journal of Medicine)	7
31	12/00/82	Freedberg, L.		Journal Article: "Lead Laden Freeway Parks Hazardous to Kids" (Neighborhood Works)	4
32	00/00/83	Kneip, T., et al.		Journal Article: "Biokinetic Modeling for Mammalian Lead Metabolism" (Neurotoxicology)	3
33	00/00/83	Needleman, H.		Journal Article: "Lead at Low Dose and the Behavior of Children" (Acta Psychiat. Scand.)	12
34	09/00/83	Ryu, J., et al.		Journal Article: "Dietary Intake of Lead and Blood Lead Concentration in Early Infancy" (Am J Dis Child)	6
35	12/00/83	Mielke, H., et al.		Journal Article: "Lead Concentrations in Inner City Soils as a Factor in the Child Lead Problem" (American Journal of Public Health)	4
36	12/00/83	Mahaffey, K.		Journal Article: "Sources of Lead in the Urban Environment" (American Journal of Public Health)	1

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37	00/00/84	Angle, C., et al.		Journal Article: "Oeaha Childhood Blood Lead and Environmental Lead: A Linear Total Exposure Model" (Environmental Research)	10
38	00/00/84	Brunekreef, B.		Journal Article: "The Relationship Between Air Lead and Blood Lead in Children: A Critical Review" (Sci. Total Environ.)	44
39	00/00/84	Rabinowitz, M., et al.		Journal Article: "Variability of Blood Lead Concentrations During Infancy" (Arch. Environ. Health)	3
40	06/08/84	Needleman, et al.		Journal Article: "The Relationship Between Prenatal Exposure to Lead and Congenital Anomalies" (Journal of the American Medical Association)	4
41	09/00/84	U.S. EPA		Health Effects Assessment for Lead	45
42	00/00/85	Clark, C.		Journal Article: "Condition and Type of Housing as an Indicator of Potential Environmental Lead Exposure and Pediatric Blood Lead Levels" (Environmental Research)	5
43	00/00/85	Quettee, S., et al.		Journal Article: "Evolution of Efficient Methods to Sample Lead Sources, Such as House and Hand Dust, in the Homes of Children" (Environmental Research)	10
44	00/00/85	Marcus, A.		Journal Article: "Multicompartment Kinetic Models for Lead: I. Bone Diffusion Models for Long Term Retention" (Environmental Research)	18
45	00/00/85	Schroeder, S.		Journal Article: "Separating the Effects of Lead and Social Factors on IQ" (Environmental Research)	11
46	00/00/85	Bornschein, R., et al.		Journal Article: "The Cincinnati Prospective Study of Low Level Lead Exposure and Its Effects of Child Development: Protocol and Status Report" (Environmental Research)	14
47	00/00/85	Bornschein, R., et al.		Journal Article: "The Influence of Social and Environmental Factors on Dust Lead, Hand Lead, and Blood Lead Levels in Young Children" (Environmental Research)	10
48	01/00/85	Centers for Disease Control		Statement: "Preventing Lead Poisoning in Young Children"	82

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49	04/00/85	Rabinowitz, et al.		Journal Article: "Home Refinishing, Lead Paint, and Infant Blood Lead Levels" (American Journal of Public Health)	2
50	10/00/85	Rabinowitz, M., et al.		Journal Article: "Lead in Milk and Infant Blood: A Dose Response Model" (Archives of Environmental Health)	4
51	00/00/86	U.S. EPA		Air Quality Criteria for Lead: Volumes 2, 3, and 4	0
52	00/00/86	Koh, T., et al.		Journal Article: "A Comparison of Blood Levels in Dogs from Lead Mining, Lead Smelting, Urban, and Rural Island Environment (Aust. Vet. J.)	3
53	00/00/86	Craswell, P., et al.		Journal Article: "Chronic Lead Nephropathy in Queensland: Alternative Methods of Diagnosis" (Australian/New Zealand Journal of Medicine)	7
54	00/00/86	Bornschein, R., et al.		Journal Article: "Exterior Surface Dust Lead, Interior House Dust Lead, and Childhood Lead Exposure in an Urban Environment" (Environmental Health)	0
55	00/00/86	Bellinger, et al.		Journal Article: "Low Level Lead Exposure and Infant Development in the First Year" (Neurobehavioral Toxicology and Teratology)	11
56	00/00/86	Rabinowitz, M., et al.		Journal Article: "Occurrence of Elevated Protoporphyr Levels in Relation to Lead Burden in Infants" (Environmental Research)	5
57	05/00/86	Hamir, A., et al.		Journal Article: "Time Required for Elevated Blood Lead Concentrations to Return to Normal in Dogs" (Australian Veterinary Journal)	2
58	06/00/86	Bornschein, et al.		Paper: "Exterior Surface Dust Lead, Interior Dust Lead and Childhood Lead Exposure in an Urban Environment" (Trace Metals in Environment Health Conference)	13
59	06/06/86	Bellinger, D., et al.		Journal Article: "Correlates of Low Level Lead Exposure in Urban Children at 2 Years of Age" (Pediatrics)	8
60	00/00/87	Bornschein, R., et al.		Journal Article: "Exterior Surface Dust Lead, Interior House Dust Lead, and Childhood Lead Exposure in an Urban Environment" (Environ. Health)	10

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62	00/00/87	Schutz, A., et al.		Journal Article: "Kinetics of Lead in Blood After the End of Occupational Exposure" (Scand J Work Environ Health)	10
63	00/00/87	Needleman, H.		Journal Article: "Low Level Lead Exposure in the Fetus and Young Child" (Neurotoxicology)	5
64	00/00/87	Hoffer, B., et al.		Journal Article: "Toxic Effects of Lead in the Developing Nervous System: In Oculoexperimental Models" (Environmental Health Perspectives)	7
65	03/05/87	Minnesota Department of Health		Memorandum Transmitting Report to Minnesota Legislature: "Lead Exposure and Health Effects of Children"	100
66	04/23/87	Bellinger, D., et al.		Journal Article: "Longitudinal Analyses of Prenatal and Postnatal Lead Exposure and Early Cognitive Development" (New England Journal of Medicine)	7
67	05/00/87	U.S. EPA		Review and Recommendations on a Lead in Soil Guideline	109
68	05/30/87	Fulton, et al.		Journal Article: "Influence of Blood Lead on the Ability and Attainment of Children in Edinburgh" (The Lancet)	6
69	00/00/88	Fergusson, D., et al.		Journal Article: "A Longitudinal Study of Dentine Lead Levels, Intelligence, School Performance, and Behavior - Part II: Dentine Lead and Cognitive Ability" (J. Child Psychol. Psychiatr.)	16
70	00/00/88	Brockhaus, A., et al.		Journal Article: "Exposure to Lead and Cadmium of Children Living in Different Areas of North West Germany: Results of Biological Monitoring Studies 1982-1986" (Occupational Environmental Health)	12
71	00/00/88	Silbergeld, E.		Journal Article: "Lead and Osteoporosis: Mobilization of Lead from Bone in Postmenopausal Women" (Environmental Research)	13

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U.S. EPA/REGION 5
OSWER DIRECTIVE COMPENDIUM
ARCANUM IRON & METAL SITE
ADMINISTRATIVE RECORD--UPDATE #1

CIRCLED ITEMS ARE
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November 1996

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9200.3-05	08/10/93	Clarification of FY'93 Superfund Program Management Manual Definitions
9200.3-07	12/27/88	Preparation of the 2nd Quarter Proactive Memo
9200.3-08	12/11/89	Flexible Funding in the Regional Extramural Operating Plan -- Superfund Management Review, Recommendation #10
9200.3-09	12/19/89	Establishing a Construction pipeline
9200.3-10	08/01/90	In-House Remedial Investigation & Feasibility Study (RIFS) Initiative Superfund Management Review: Recommendation 45.B.2)
9200.3-11	12/27/90	Final Policy on Setting RIFS Priorities
9200.3-14-1	10/01/93	Superfund Program Implementation Manual FY 1994 Vol. I & II

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NOTE: (*) = ELIMINATED

DIRECTIVE #	DATE	TITLE
9200.3-14-2	04/01/94	Superfund Program Management Manual FY'94
9200.3-17	09/21/94	Integration of Environmental Justice Into OSWER Policy, Guidance, & Regulatory Development
9200.3-18/-18FS	05/01/95	Environmental Justice Action Agenda
9200.3-19/-19FS	05/01/95	Waste Programs Environmental Justice Accomplishments Report
9200.3-20	05/01/95	Waste Programs Environmental Justice Accomplishments Report Executive Summary
9200.3-23FS	09/01/96	The Role of Cost in the Superfund Remedy Selection Process
9200.4-00(a)	03/31/89	Staff Responsibilities for Managing OERR Documents
9200.4-02-2	04/01/90	OERR Publications Standards Toolbox.
9300.4-05	09/30/96	Pre-CERCLIS Screening Guidance
9200.4-06A	02/22/90	Uniform Format for OERR Policy/Directive Memos - Revised Instructions
9200.4-07	03/02/90	Coordination of Quick Reference Fact Sheets 90-Day Study - #31A
9200.4-1	02/09/87	Guidelines for Producing Superfund Documents
9200.4-14	01/19/95	Consistent Implementation of the FY 1993 Guidance on Technical Impracticability of Ground- Water Restoration at Superfund Sites
<u>9200.4-15</u>	07/31/96	Reducing Federal Oversight at Superfund Sites with Cooperative and Capable Parties
9200.5-006	11/01/90	Superfund: Environmental Progress
9200.5-13	10/01/94	The Environmental Response Center
9200.5-1151	02/01/91	Update on Implementation of the Oil Pollution Act of 1990
9200.5-154	01/01/95	Inland Area Contingency Plan Region 5
9200.5-162	12/01/95	Presumptive Remedies for Soils, Sediments, & Sludges at Wood Treater Sites
9200.5-2151	06/01/90	Superfund Design & Construction Update Vol. 4, No. 3
9200.5-2151	10/01/90	Superfund Design & Construction Update Vol. 4, No. 4
9200.5-2161	04/01/90	Superfund Records of Decision Update Vol. 5, No. 4
9200.5-2161	06/01/90	Superfund Records of Decision Update Vol. 5, No. 5
9200.5-2161	09/01/90	Superfund Records of Decision Update Vol. 5, No. 7
9200.5-2161	12/01/90	Superfund Records of Decision Update Vol. 6, No. 1
9200.5-2161	05/01/91	Superfund Records of Decision Update Vol. 6, No. 2
9200.5-2161	07/01/91	Superfund Records of Decision Update Vol. 6, No. 3
9200.5-251FS	11/01/89	Innovative Technology - In-Situ Vitrification
9200.5-253FS	11/01/89	Innovative Technology - Best Solvent Extraction Process
9200.5-254FS	11/01/89	Innovative Technology - Glycolate Dehalogenation

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9200.5-321FS	04/01/90	Contact Laboratory Program Analytical Results Database (CARD)
9200.5-4011	12/01/90	CORAS Bulletin, Vol. 1. No. 10
9200.5-402A	05/01/92	Contracting & Subcontracting Guide to the Superfund Program
9200.5-723	09/01/90	National Priorities List (NPL) Sites: Michigan
9200.5-748	09/01/90	National Priorities List (NPL) Sites: Wisconsin
9200.6-02	04/01/88	National Priorities List (NPL) Docket Guidance
9200.6-041	10/01/92	Directory of Superfund Rulemaking Dockets, Vol. 1. No. 1
9200.6-303(95-1)	05/01/95	Health Effects Assessment Summary Tables
9200.7-01(a)	02/10/89	Superfund Program Directives, Issued from 8/1/88 through 1/31/89
9200.7-01(b)	03/13/89	Superfund Program Directives, Issued During February 1989
9200.7-01(abc)	03/31/89	Catalog supplement: Ordering Information & Catalog Addendum through March 1989
9200.7-01-1	05/01/89	Interim Report Superfund Publications System
9200.7-021	08/01/92	Superfund & Enforcement Program Publications Update, Vol. 1, No. 1
9200.7-021	03/01/94	Superfund & Enforcement Program Publications Update, Vol. 1, No. 5
9200.9-02	07/28/93	Procedures to Ensure that CLP Laboratories Are Not Paid for Non-complaint or Unusable Data
9200.9-02	02/05/96	Procedures to Ensure that CLP Laboratories Are Not Paid for Non-complaint or Unusable Data: First Quarter FY 96
9201.1-01 (*)	11/27/91	Implementation of the Superfund Alternative Remedial Contracting Strategy (ARCS): Report of the Administrator's Task Force
9201.01A	06/01/89	A Management Review of the Superfund Program
9202.1-04	05/22/92	Identification of a Senior Superfund Official for Addressing Special NPL Site-Related Issues
9202.1-05 (*)	07/07/92	Required Contracts Management Training for Regional Superfund Personnel
9202.1-06 (*)	09/04/92	Initiative to Streamline the Alternative Remedial Contracting Strategy (ARCS) Contracts' Award Fee Process
9202.1-09	02/11/93	Guidance on Program Management Activities Under ARCS
9202.1-10-1	03/01/93	Compendium of Good Ideas, Models of Success & Lessons Learned, Vol. 1, Highlights
9202.1-10-2	03/01/93	Compendium of Good Ideas, Models of Success & Lessons Learned, Vol. 2, Source Book
9202.1-12	07/29/93	Guidance on Preparing Independent Government Cost Estimates (IGCEs)
9202.1-14	02/02/93	Current National Superfund Program Priorities
9202.1-20	03/01/94	Cost Management Manual for the Superfund Remedial & Enforcement Programs

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9203.0-06	06/04/90	Superfund Responsiveness Summaries (Superfund Management Review: Recommendation #43E)
9203.1-01	04/07/92	Superfund Accelerated Cleanup Model (SACM)
9203.1-03	07/07/92	Guidance on Implementation of the Superfund Accelerated Cleanup Model (SACM) Under CERCLA & the NCP
9203.1-03A	10/26/92	Exercising Flexibility Through the Superfund Accelerated Cleanup Model (SACM)
9203.1-03/SUP	08/22/94	Guidance on Accelerating CERCLA Environmental Restoration at Federal Facilities
9203.1-051	12/01/92	Status of Key SACM Program Management Issues - Interim Guidance, Vol. 1, No. 1
9203.1-051	12/01/92	Enforcement Under SACM - Interim Guidance, Vol. 1, No. 3
9203.1-08	04/27/93	Further Direction on Implementing the Superfund Accelerated Cleanup Model (SACM)
9203.1-10	07/12/93	Superfund Accelerated Cleanup Model (SACM) -- Transmittal of Questions & Answers Bulletin & Issue Submittal Form
9203.1-10FS	07/01/93	Superfund Accelerated Cleanup Model (SACM) -- Questions & Answers
9203.1-11	09/14/93	Superfund Accelerated Cleanup Model (SACM) -- Coordination Strategy
9203.1-13	01/28/94	Expectations for Full Implementation of SACM
9203.1-14	03/08/94	Update on SACM Implementation
9204.1-01	04/20/92	Establishment of OERR Records Management Program
9208.0-10	11/06/90	Guidance on Alternative Dispute Resolution in Enforcement Actions
9208.0-11	05/01/93	Enforcement Mediation - Status Report on The Use of Alternative Dispute Resolution In Environmental Protection Agency Enforcement Actions
9208.0-12	10/01/91	Superfund Enforcement Mediation - Regional Pilot Project Results
9208.0-13	04/01/92	Superfund Enforcement Mediation - Case Studies
9210.0-01	06/27/95	Transmittal of Guidance for Data Collection at State-lead NPL Sites
9221.0-02A	05/30/90	CERCLIS Data Handling Support Policy Statement
9221.0-1	03/04/86	Data Handling Support for CERCLIS
9221.0-2	03/31/86	CERCLIS Data Handling Support Policy Statement
9221.2-01FS	04/01/91	CERCLIS - WasteLAN - CleanLAN
9223.0-1A	11/01/85	Chemical Emergency Preparedness Program (Interim Guidance)
9225.0-02	04/25/84	Forwarding Claims to Headquarters
9225.0-3	11/25/85	Notification of Restrictions on Reimbursement of Private Party Costs for Removal Actions
9225.1-01	04/19/89	Procurement Under Preauthorization/Mixed Funding OSWER Directive 9225.1-01
9225.3-01FS	11/01/89	Reimbursement to Local Governments for Emergency Response to Hazardous Substance Releases

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NOTE: (*) - ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9225.3-01FS-A	10/01/92	Reimbursement to Local Governments for Emergency Response to Hazardous Substance Releases
9230.0-02	05/09/83	Superfund Community Relations Policy
9230.0-03	09/01/83	Community Relations in Superfund: A Handbook - Interim Version
9230.0-3a	03/22/85	Community Relations Activities at Superfund Enforcement Sites -- Interim Guidance
9230.0-3A	05/05/86	Community Relations in Superfund: A Handbook - Revised
9230.0-3B	06/01/88	Community Relations in Superfund: A Handbook - Interim Version
9230.0-03C	01/01/92	Community Relations in Superfund: A Handbook
9230.0-04	10/17/83	Community Relations Guidance for Evaluating Citizens Concerns at Superfund Sites
9230.0-05	10/02/85	Community Relations Requirements for Operable Units
9230.0-06	06/04/90	Superfund Responsiveness Summaries
9230.0-08	03/07/90	Planning for Sufficient Community Relations
9230.0-09	08/31/90	Community Relations: Use of Senior Environmental Employees in Superfund
9230.0-13	12/19/90	Minimizing Problems Caused by Staff Turnover
9230.0-15	06/15/90	Role of Community Interviews in the Development of a Community Relations Program for Remedial Response
9230.0-16	11/05/90	Making Superfund Documents Available to the Public Throughout the Cleanup Process, & Discussing Site Findings & Decisions as They are Developed
9230.0-17	09/28/90	Using State & Local Officials to Assist in Community Relations
9230.0-18	01/21/91	Incorporating Citizen Concerns Into Superfund Decision-making
9230.0-19	09/18/90	Proposed Method to Evaluate the Effectiveness of Community Involvement in Superfund
9230.0-20	11/30/90	Innovative Methods to Increase Public Involvement in Superfund Community Relations
9230.1-01	03/20/87	Interim Guidance on Technical Assistance Grants
9230.1-02	01/11/88	Technical Assistance Grants Program Activities Prior to the Issuance of the Interim Final Rule
9230.1-03	06/01/88	Citizens' Guidance Manual for the Technical Assistance Grant Program
9230.1-04	06/01/88	Superfund Technical Assistance Grants Program - Regional Guidance Manual
9230.1-06	01/31/90	Technical Assistance Grants: Waivers of \$50,000 Cap & Grant Amendments
9230.1-10FS	03/01/95	Technical Assistance Grant (TAG) Audits
9230.2-01	09/28/88	OERR Communications Planning Process
9230.2-02	09/26/88	Peer Review and Approval of Abstracts and Papers
9234.0-02	10/02/85	CERCLA Compliance with Other Environmental Statutes

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DIRECTIVE #	DATE	TITLE
9234.0-4	08/19/86	Consideration of RCRA Requirements in Performing CERCLA Responses at Mining Waste Sites
9234.0-05	07/09/87	Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements
9234.1-01	08/08/88	CERCLA Compliance with Other Laws Manual
9234.1-02	11/01/87	CERCLA Compliance with Other Laws Manual (DRAFT): Clean Air Act & Other Environmental Statutes
9234.1-03	03/13/89	Regional ARARs and LDR Contacts
9234.1-06	12/27/89	Applicability of Land Disposal Restrictions to RCRA & CERCLA Ground Water Treatment Reinjection (Superfund Management Review: Recommendation No. 26)
9234.2-01FS	05/01/89	ARARs Q's & A's
9234.2-01FS-A	07/01/91	ARARs Q's & A's: General Policy, RCRA, CWA, SDWA, Post-ROD Information, & Contingent Waivers
9234.2-02FS	09/01/89	CERCLA Compliance with Other Laws Manual - Guide to Manual
9234.2-03FS	12/01/89	CERCLA Compliance with Other Laws Manual - Overview of ARARs Focus on ARAR Waivers
9234.2-04FS	10/01/89	CERCLA Compliance with Other Laws Manual - RCRA ARARs: Focus on Closure Requirements
9234.2-05FS	12/01/89	CERCLA Compliance with Other Laws Manual - CERCLA Compliance with State Requirements
9234.2-06FS	02/05/90	ARARs Fact Sheet Entitled "CERCLA Compliance with the CWA & SDWA"
9234.2-07FS	04/01/90	CERCLA Compliance with Other Laws Manual - Summary of Part II CAA, TSCA, and Other Statutes
9234.2-08FS	05/01/90	ARARs Q's & A's Compliance with the Toxicity Characteristics Rule: Part I
9234.2-09FS	05/01/90	ARARs Q's & A's Compliance with Federal Water Quality Criteria
9234.2-10FS	07/01/90	ARARs Publications Reference Sheet DRAFT.
9234.2-11FS	07/01/90	ARARs Q's & A's: State Ground-Water Antidegradation Issues
9234.2-15FS	07/01/91	ARARs Q's & A's: Compliance with New SDWA National Primary Drinking Water Regulations (Phase II)
9234.2-25	10/04/93	Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration (Interim Final)
9234.3-001	07/01/90	ARARs Short Guidance Quarterly Report
9240.0-1	10/01/84	User's Guide to the Contract Laboratory Program
9240.0-2	03/20/86	Analytical Support for Superfund
9240.0-02A	11/20/90	Further Guidance on OSWER Directive 9242.0-02 Analytical Support for Superfund
9240.0-02B	07/06/92	Extending the Tracking of Analytical Services to Potentially Responsible Party-Lead

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
		Superfund Sites (Supplemental Guidance on OSWER Directive 9240.0-2A)
9240.0-03	08/18/88	Superfund Analytical Review & Oversight
9240.0-05	09/01/89	Decentralization of Superfund Bottle Repository Functions
9240.0-05A	03/08/93	Updated "Specifications & Guidance for Obtaining Contaminant-Free Sample Containers" April 1992 & Designated as OSWER Directive 9240.0-05A
9240.0-25	01/19/93	Reassignment of CLP Transportation Functions
9240.1-05-1	03/17/94	USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (FINAL)
9242.2-01B	10-01-87	Emergency Response Cleanup Services Contracts (ERCs) User's Manual
9242.2-02	05/10/89	Site-Specific Contracting for Removals
9242.2-03 (*)	11/29/91	Administrative Guidance for the FIT to ARCS (FIT/ARCS)
9242.2-05 (*)	01/22/92	Implementation of ARCS Task Force Plan Recommendations
9242.2-06	01/31/92	Superfund Contracts Management Issues
9242.2-06a	08/05/92	Resources for Preparing Independent Government Estimates for Remedial Contracting Work Assignments
9242.2-08FS	05-01-93	Superfund Response Action Contracts
9242.2-1A	06/01/86	Emergency Response Cleanup Services (ERCS) Contracts Users' Manual
9242.3-03	07/06/84	Procedures for Initiating Remedial Response
9242.3-05	07/25/84	Rem II Contract Award Fee Performance Evaluation
9242.3-06	08/25/86	Management of Files from REM/FIT Contract Closeout
9242.3-07 (*)	03/09/87	Implementation of the Decentralized Contractor Performance Evaluation and Award Fee Process for Selected Remedial Program Contracts
9242.3-08	12/10/91	Revision of Policy Regarding Superfund Project Assignment Between Alternative Remedial Contracting Strategy Contractors & the U.S. Army Corps of Engineers
9242.3-08A	06/08/95	Clarification of Policy Regarding Work Assignments to the U.S. Army Corps of Engineers (USACE)
9242.3-09 (*)	07/29/92	Use of Time & Materials & Cost Reimbursement Subcontracts for Remedial Actions Under the Alternative Remedial Contracting Strategy
9242.3-10 (*)	03/16/92	Congressional Limits for FY'92 Alternative Remedial Contracting Strategy (ARCS) Program Management Costs

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9242.4-01A	07/01/87	Technical Assistance Team (TAT) Contracts Users' Manual
9242.5-02	09/26/88	Model Performance Standards for Superfund Project Officers, Deputy Project Officers, and Work Assignment Managers/Delivery Order Officers
9242.5-02A	12/13/90	Model Performance Standards for Superfund Project Officers, Deputy Project Officers, and Work Assignment Managers/Delivery Order Officers
9242.6-01 (*)	05/01/89	ARCS Work Assignment Management - Field Guide
9242.6-02	01/03/89	Guidance for Organizing ARCS Contract Files
9242.6-03	08/09/89	Need for Contract Officers Authorization Before Contractor Activation
9242.6-04	10/31/89	OERR Organizational Conflict of Interest Review and Approval Program (Superfund Management Review: Recommendation #46.C)
9242.6-06	03/28/90	Quality Assurance Review for Extramural Projects; Environmental Measurements
9242.6-07	08/31/90	Long Term Contracting Strategy for Superfund (Superfund Management Review: Recommendation E.2)
9242.6-08	12/05/90	Total Quality Management (TQM) and quality Assurance (QA) in Superfund
9242.6-09	12/17/90	Long-Term Contracting Strategy for Superfund--Implementation Framework
9242.6-13	09/08/92	Performance Tracking Under ARCS Contracts
9242.6-16FS	06/01/95	Long-Term Contracting Strategy for Superfund--Implementation Update
9250.1-01	03/03/83	Policy On Cost-Sharing At Publicly-Owned Sites.
9250.2-01	05/05/83	Policy On Cost-Sharing of Immediate Removals at Publicly-Owned Sites
9250.3-01	05/13/83	Waiver of 10 Percent Cost-Share for Remedial Planning Activities at Privately-Owned Sites
9250.3-02	06/03/83	Guidance on Implementing Waiver of 10 Percent Cost-Share for Remedial Planning
9260.1-09	03/24/86	Delegation of Remedy Selection to Regions (Under Delegation #14-5)
9260.2-00	04/01/84	Delegations of Authority Under the Comprehensive Environmental Response, Compensation, & Liability Act (CERCLA)
9260.3-00	04/16/84	Delegations of Authority Under the Federal Water Pollution Control Act (FWPCA) which are Applicable to the Superfund Program
9260.5-01	05/25/88	Redelegation of Authority Under CERCLA & SARA
9260.5-02	09/24/87	Superfund Internal Delegations of Authority
9260.5-02A	04/01/90	Superfund Internal Delegations of Authority
9272.0-01	04/02/84	Implementation of CERCLA Strategy at Federal Facilities
9272.0-2	12/03/84	Initial Guidance on Federal Facilities CERCLA Sites

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9272.0-03	08/19/85	Responsibilities for Federal Facilities
9272.0-04	08/19/85	Federal Facilities
9272.0-05	08/26/85	Responsibilities for Federal Facilities
9275.1-01	07/31/84	Removal Financial Management Instructions
9275.2-01	09/21/84	Remedial Financial Management Instructions
9280.0-02 (*)	08/06/85	Policy on Flood Plans and Wetlands Assessments
9280.0-03	05/09/94	Considering Wetlands at CERCLA Sites
9283.1-01	03/24/86	Recommendations for Ground Water Remediation at the Millcreek, PA Site
9283.1-02	12/01/88	Guidance on Remedial Action for Contaminated Groundwater at Superfund Sites
9283.1-03	10/10/90	Suggested ROD Language for Various Ground Water Remediation Options
9283.1-04	10/01/90	Subsurface Contamination Reference Guide
9283.1-06	05/27/92	Considerations in Ground-Water Remediation at Superfund Sites and RCRA Facilities -- Update
9285.0-01	08/16/88	OSWER Integrated Health and Safety Policy (Renumbered. Formerly 9010.15)
9285.0-01A	02/19/93	OSWER Integrated Health and Safety Standard Operating Practices
9285.0-01B	11/84/84	Standard Operating Safety Guide Manual
9285.1-02	07/05/88	Standard Operating Safety Guides
9285.1-03	06/01/92	Standard Operating Safety Guides
9285.2-01	01/01/85	Field Standard Operating Procedures Manual: FSOP #4 Site Entry
9285.2-02	01/01/85	Field Standard Operating Procedures Manual: FSOP #7 Decontamination of Response Personnel
9285.2-03	01/01/85	Field Standard Operating Procedures Manual: FSOP #8 Air Surveillance
9285.2-04	04/01/85	Field Standard Operating Procedures Manual: FSOP #6 Work Zones
9285.2-05	04/01/85	Field Standard Operating Procedures Manual: FSOP #9 Site Safety Plan
9285.2-06FS	04/01/91	Establishing Work Zones at Uncontrolled Hazardous Waste Sites
9285.2-07FS	04/01/91	Hazardous Waste Operations and Emergency Response: RCRA TSD and Emergency Response Without Regard to Location
9285.2-08FS	04/01/91	Hazardous Waste Operations and Emergency Response: Uncontrolled Hazardous Waste Sites and RCRA Corrective Actions
9285.3-01	03/15/84	Occupational Safety & Health Technical Assistance and Enforcement Guidelines for Superfund Hazardous Waste Site Activities
9285.3-02	07/07/87	Employee Occupational Health & Safety

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9285.3-05	05/22/90	Hazmat Team Planning
9285.3-06	03/01/90	Priority for Health & Safety Requirements. Especially Medical Surveillance Requirements for EPA Employees Who Support OSWER Programs
9285.4-01	10/01/86	Superfund Public Health Evaluation Manual
9285.4-02	03/11/87	Guidance for Coordinating ATSDR Health Assessment Activities with the Superfund Remedial Process
9285.4-03	04/07/88	Health Assessments by ATSDR in FY'88
9285.4-06	11/21/91	ATSDR Health Consultations Under CERCLA
9285.4-1	11/16/87	Updated Reference Dose & Cancer Potency Numbers for Use in Risk Assessments
9285.5-1	01/14/86	DRAFT Superfund Exposure Assessment Manual
9285.6-03	03/25/91	Human Health Evaluation Manual. Supplemental Guidance: "Standard Default Exposure Factors"
9285.6-04FS	03/01/94	Emergency Responders Agreements for Fund-Lead Remedial Actions
9285.6-1	12/17/86	Superfund Risk Assessment Information Directory
9285.7-01	03/01/89	Risk Assessment Guidance for Superfund -- Environmental Evaluation Manual (EPA/540/1-89/001A)
9285.7-02	03/01/89	Risk Assessment Guidance for Superfund -- Environmental Evaluation Manual. Vol. II. Interim Final (EPA/540/1-89/001)
9285.7-01A	12/01/89	Risk Assessment Guidance for Superfund. Part A -- Health Evaluation Manual. Vol. I. Interim Final (EPA/540/1-89/002)
9285.7-01B	12/31/91	Risk Assessment Guidance for Superfund: Vol. I. Human Health Evaluation Manual. (Part B. Development of Risk-based Preliminary Remediation Goals. Interim)
9285.7-01C	12/01/91	Risk Assessment Guidance for Superfund. Vol. I. Human Health Evaluation Manual. (Part C. Risk Evaluation of Remedial Alternatives. Interim)
9285.7-05	10/01/90	Guidance for Data Useability in Risk Assessment (Interim Final)
9285.7-05FS	09/01/90	Guidance for Data Useability in Risk Assessment
9285.7-09A	04/01/92	Guidance for Data Useability in Risk Assessment (Part A). Final
9285.7-09AFS	05/01/92	Guidance for Data Useability in Risk Assessment (Part A). Final
9285.7-09B	05/01/92	Guidance for Data Useability in Risk Assessment (Part B). Final
9285.7-13	05/26/92	Implementing the Deputy Administrator's Risk Characterization Memorandum
9285.7-15-1	02/01/94	Guidance Manual for the Integrated Exposure Uptake Biokinetic Model for Lead in Children
9285.7-16	01/04/94	Guidance on Use of Integrated Risk Information System (IRIS) Values

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DIRECTIVE #	DATE	TITLE
9285.7-17	08/12/94	Role of the Ecological Risk Assessment in the Baseline Risk Assessment
9285.9-01	02/03/89	Inauguration of the OSC/RPM Program
9285.9-02	05/01/89	OSC/RPM Support Program - Mentoring (Pilot, 3 attachments)
9285.9-03	06/01/89	Superfund University Training Institutes - Request for Workshop Attendees
9285.9-04	06/30/89	On-Scene Coordinator and Remedial Project Manager Special Recognition Awards
9285.9-05	09/29/89	Mandatory Training Requirements of OSCs and RPMs
9285.9-06	10/31/89	Mandatory Community Relations Training -- Superfund Management Review Implementation Product Recommendation: #43.P(1)
9285.9-07	11/01/89	Implementing the Mentoring Program for Newly-Hired OSCs/RPMs - Superfund Management Review Implementation Product (Recommendation #45B.1)
9295.0-02	05/07/92	Memorandum of Understanding (MOU) Between the NOAA and the USEPA Concerning the Notification and Coordination of Activities Pursuant to the CERCLA
9295.1-01	04/02/85	MOU Between ATSDR and EPA
9295.2-02	06/24/83	Joint Corps/EPA Guidance
9295.2-03	12/03/84	Interagency Agreement Between The U.S. Army Corps of Engineers & U.S. EPA In Executing P.L. 96.510 (CERCLA)
9295.2-04	03/21/90	EPA/U.S. Army Corps of Engineers Payment Process, Direct Cite/Revised Reimbursement Methods
9295.4-01	11/05/90	MOU Between ORD and OERR
9295.5-01	04/05/85	MOU Between FEMA and EPA for the Implementation of CERCLA Relocation Activities Under PL 96-510
9295.5-02	06/14/85	Implementation of EPA/FEMA MOU on CERCLA Relocations
9295.9-05	09/29/89	Mandatory Training Requirements for OSCs and RPMs
9318.0-05	04/13/87	Environmental Review Requirements for Removal Actions
9319.0-01FS	02/01/90	The Final National Contingency Plan: New Directions for Superfund
9320.1-01	02/02/82	Guidance for Establishing the National Priorities List
9320.1-02	06/28/82	Guidance for Establishing the National Priorities List
9320.1-03	05/17/83	Promulgation of the National Priorities List
9320.1-04	07/17/84	National Priorities List Categorization
9320.1-07	05/29/87	Interim Guidance for Consideration of §§ 105(g) and 125 of the Superfund Amendments and Reauthorization Act of 1986 Prior to NPL Proposal of Special Study Waste Sites

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9320.1-05	09/10/86	RCRA NPL Listing Policy
9320.1-09	08/21/86	Listing Municipal Landfills on the NPL
9320.1-11	04/30/93	Discussions with the Public Concerning NPL Listings
9320.2-03A	12/01/88	Procedures for Completion and Deletion of Sites from the NPL
9320.2-03B	12/29/89	Update to the "Procedures for Completion and Deletion of NPL Sites" Guidance Document Regarding the Performance of Five-Year Reviews
9320.2-03C	02/19/92	Update No. 2 to "Procedures for Completion and Deletion of NPL Sites"
9320.2-05	10/08/92	Amendment to Historical Definitions of NPL Deletion Start and Completion Dates
9320.2-06	06/21/93	NPL Construction Completion Definition at Bioremediation and Soil Vapor Extraction Sites
9320.2-07	08/26/93	Additional Guidance on "Worst Sites" and "NPL Caliber Sites" to Assist in SACM Implementation
9320.2-2	04/04/86	Completion and Deletion of NPL Sites
9320.3-01	05/12/83	Guidance for Updating the National Priorities List
9320.3-02	01/18/84	Instructions for Promulgating the National Priorities List Update
9320.3-03	05/23/84	Procedures for Updating the National Priorities List
9320.3-04	12/10/84	Guidance for Proposed NPL Update #3 - February 1985
9320.3-05	04/30/85	NPL Information Update - Update #4
9320.3-06	09/17/85	Updating the National Priorities List: Update #6 Proposal
9320.3-08	02/05/90	CERCLIS Listing
9320.4-01	04/18/85	Interim Information Release Policy
9320.7-01FS	11/01/90	The Revised Hazard Ranking System: An Improved Tool for Screening Superfund Sites
9320.7-02FS	11/01/90	The Revised Hazard Ranking System: Qs and As
9320.7-04FS	11/01/90	Closing the NPL Book Under the Original HRS
9330.1-01	01/28/83	Requirements for Selecting an Off-Site Option in a Superfund Response Action
9330.1-2	12/03/86	Evaluation of Program and Enforcement-Lead RODs for Consistency with RCRA Land Disposal Restrictions
9330.2-01	05/06/85	Procedures for Planning and Implementing Off-site Response Actions
9330.2-04	04/15/86	Discharge of Wastewater from CERCLA Sites in POTWS
9330.2-05	05/12/86	CERCLA Off-site Policy: Providing Notice to Facilities
9330.2-07	09/14/89	Notification of Out-of-State Shipments of Superfund Site Wastes
9330.2-11	08/01/90	CERCLA Site Discharges to POTWS Treatability Manual

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NOTE: (*) = ELIMINATED

DIRECTIVE #	DATE	TITLE
9330.2-13FS	03/01/91	Guide to Discharging CERCLA Aqueous Wastes to Publicly Owned Treatment Works (POTWs)
9335.0-25A	02/08/89	Use of Removal Approaches to Speed Up Remedial Action Projects
9335.3-02FS-1	11/01/89	A Guide to Developing Superfund Records of Decision
9335.3-02FS-2	11/01/89	A Guide to Developing Superfund Proposed Plans
9340.1-01	03/20/84	Participation of Potentially Responsible Parties in Development of Remedial Investigations & Feasibility Studies Under CERCLA
9340.1-02	01/26/96	Revised Policy On Performance of Risk Assessments During Remedial Investigation /Feasibility Studies (RIFS) Conducted by Potentially Responsible Parties (PRPs)
9340.2-01	02/27/85	Preparation of Decision Documents for Approving Fund-Financed and Potentially Responsible Party Remedial Actions Under CERCLA
9345.0-01	01/01/88	Preliminary Assessment Guidance FY'88
9345.0-04	11/07/88	Policy Requiring Utilization of Brochure on Preliminary Assessment Petitions
9345.0-05I	05/01/92	ECO Update. Vol. 1. No. 4
9345.0-07	12/08/92	Standard Document for Remedial Site Assessment Decisions
9345.1-02	02/26/87	Expanded Site Inspection: Transitional Guidance for FY'88
9345.1-05	09/09/92	Guidance for Performing Site Inspections Under CERCLA
9345.1-08	12/26/91	Regional Quality Control Guidance for NPL Candidate Sites
9345.1-1	01/07/86	Comment on Draft Sampling Strategy to Support HRS Scoring
9345.1-15FS	08/24/93	Guidance on Conducting Site Inspection Prioritization Activities
9345.1-16	10/21/93	Integrating Removal and Remedial Site Assessment Investigations
9345.1-16FS	09/01/93	Integrating Removal and Remedial Site Assessment Investigations
9345.2-01	02/12/88	Pre-Remedial Strategy for Implementing SARA
9345.2-02	03/10/89	Regional Pre-remedial Program Objectives for FY'89 and First Quarter of FY'90
9345.3-01	01/30/89	Request for Designation of State Natural Resource Trustees
9345.3-03FS	04/01/92	Guide to Management of Investigation - Derived Wastes
9347.0-01	03/03/86	Interim RCRA/CERCLA Guidance on Non-Contiguous Sites and On-Site Management of Waste and Treatment Residue
9347.1-02	04/17/89	Policy for Superfund Compliance with the RCRA Land Disposal Restrictions Under RCRA
9347.2-01	06/05/89	Land Disposal Restrictions as Relevant and Appropriate Requirements for CERCLA Contaminated Soil and Debris
9347.3-01FS	07/01/89	Superfund LDR Guide #1: Overview of RCRA Land Disposal Restrictions (LDRs)

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9347.3-02FS	07/01/89	Superfund LDR Guide #2: Complying With the California List Restrictions Under Land Disposal Restrictions (LDRs)
9347.3-03FS	07/01/89	Superfund LDR Guide #3: Treatment Standards & Minimum Technology Requirements Under Land Disposal Restrictions (LDRs)
9347.3-04FS	07/01/89	Superfund LDR Guide #4: Complying With the Hammer Restrictions Under Land Disposal Restrictions (LDRs)
9347.3-05FS	07/01/89	Superfund LDR Guide #5: Determining When Land Disposal Restrictions (LDRs) Are <u>Applicable</u> to CERCLA Response Actions
9347.3-06FS	07/01/89	Superfund LDR Guide #6A: Obtaining a Soil and Debris Treatability Variance for Remedial Actions
9347.3-06FS	09/01/90	Superfund LDR Guide #6A (2nd Edition): Obtaining a Soil and Debris Treatability Variance for Remedial Actions
9347.3-06BFS	09/01/90	Superfund LDR Guide #6B: Obtaining a Soil and Debris Treatability Variance for Remedial Actions
9347.3-07FS	12/01/89	Superfund LDR Guide #7: Determining When Land Disposal Restrictions (LDRs) are Relevant and Appropriate to CERCLA Response Actions
9347.3-08FS	10/01/90	Superfund LDR Guide #8: Compliance with Third Third Requirements under the LDRs
9347.3-09FS	09/01/90	A Guide to Delisting of RCRA Wastes for Superfund Remedial Responses
9347.3-10FS	04/01/91	Guide to Obtaining No Migration Variances for CERCLA Remedial Actions
9347.3-11FS	10/01/90	CERCLA Compliance with the RCRA Toxicity Characteristics (TC) Rule: Part II
9347.3-15	10/01/91	Compendium of CERCLA ARARs Fact Sheets and Directives
9355.0-3	07/16/82	Uncontrolled Hazardous Waste Site Ranking System - A Users Manual (HW-10)
9355.0-4A	06/01/86	Superfund Remedial Design and Remedial Action Guidance
9355.0-4B	06/01/95	Remedial Design/Remedial Handbook
9355.0-7A	10/17/86	Data Quality Objectives Development Guidance for Uncontrolled Hazardous Waste Site Remedial Response Activities (DRAFT)
9355.0-7B	03/01/87	Data Quality Objectives for Remedial Response Activities (Development Process)
9355.0-08	04/01/85	Modeling Remedial Actions at Uncontrolled Hazardous Waste Sites
9355.0-10	09/01/85	Remedial Action Costing Procedures Manual
9355.0-12	11/26/85	Suggested Actions to Keep Projects Moving During Funding Suspension
9355.0-14	12/01/87	A Compendium of Superfund Field Operations Methods

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<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9355.0-15	04/02/86	Third Quarter Superfund Strategy
9355.0-16	05/30/86	Superfund Slowdown
9355.0-17	07/03/86	Superfund Slowdown
9355.0-19	12/24/86	Interim Guidance on Superfund Selection of Remedy
9355.0-20	07/23/87	RIFS Improvements
9355.0-21	07/24/87	Additional Interim Guidance for FY'87 Records of Decision
9355.0-23	10/26/87	Interim Policy on Funding for Ground & Surface Water Restoration Actions
9355.0-24	12/28/87	OSWER Strategy for Management Oversight of the CERCLA Remedial Action Start Mandate
9355.0-24A (*)	12/22/92	The SARA "200" Remedial Action Starts Requirement
9355.0-25	12/09/88	Statement of Policy: Requirements for Using Removal Authorities for Speeding Up Remedial Projects
9355.0-25A (*)	07/06/89	Use of Removal Approaches to Speed Up Remedial Action Projects
9355.0-26	02/21/89	Advancing the Use of Treatment Technologies for Superfund Remedies
9355.0-27FS	04/01/90	A Guide to Selecting Superfund Remedial Actions
9355.0-28	06/15/89	Control of Air Emission from Superfund Air Strippers at Superfund Groundwater Sites
9355.0-29	08/13/90	Scoper's Notes. An RIFS Costing Guide
9355.0-30	04/22/91	Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions
9355.0-36	12/11/91	FY'92 Themes for Regional Coordination to Support Continuous Improvements of Superfund's Remedial Program
9355.0-38	05/01/92	Guide for Conducting Treatability Studies Under CERCLA - Chemical Dehalogenation
9355.0-38FS	05/01/92	Chemical Dehalogenation Treatability Studies under CERCLA: An Overview
9355.0-39FS	06/01/92	Remedial Action Report - Documentation for Operable Unit Completion
9355.0-43	03/01/95	Guidance for Scoping the Remedial Design
9355.0-47FS	09/01/93	Presumptive Remedies: Policy and Procedures
9355.0-48FS	09/01/93	Presumptive Remedies: Site Characterization and Technology Selection for CERCLA Sites With Volatile Organic Compounds in Soils
9355.0-49FS	09/01/93	Presumptive Remedies for CERCLA Municipal Landfill Sites
9355.0-58FS	06/01/95	Remedial Design/Remedial Action (RD/RA) Handbook
9355.1-02	09/01/87	The RPM Primer - An Introductory Guide to the Role and Responsibilities of the Superfund Remedial Project Manager
9355.1-1	01/27/86	Draft Federal-Lead Remedial Project Management Handbook

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DIRECTIVE #	DATE	TITLE
9355.2-1	12/01/86	Superfund State-Lead Remedial Project Management
9355.3-01	10/01/88	Guidance for Conducting Remedial Investigations & Feasibility Studies Under CERCLA - Interim Final
9355.3-01FS1	11/01/89	Getting Ready Scoping The RIFS
9355.3-01FS2	11/01/89	The Remedial Investigation Site Characterization & Treatability Studies
9355.3-01FS3	11/01/89	The Feasibility Study: Development & Screening of Remedial Action Alternatives
9355.3-01FS4	03/01/90	The Feasibility Study: Detailed Analysis of Remedial Action Alternatives
9355.3-02	07/01/89	Interim Final Guidance on Preparing Superfund Decision Documents: The Proposed Plan, The Record of Decision, Explanation of Significant Differences, The Record of Decision Amendment.
9355.3-02FS-3	04/01/91	Guide to Developing Superfund No Action, Interim Action, and Contingency Remedy RODs
9355.3-02FS-4	04/01/91	Guide to Addressing Pre-ROD and Post-ROD Changes
9355.3-03	02/01/88	Guidance Document for Providing Alternate Water Supplies
9355.3-05	04/25/88	RIFS Improvements Follow-up
9355.3-06	02/14/89	RI/FS Improvements Phase II, Streamlining Recommendations
9355.3-07	05/01/89	Result of FY 88 Record of Decision Analysis
9355.3-08	11/30/89	FY 90 Regional Coordination Plan and Themes for the Remedial Investigation/Feasibility Study and Selection of Remedy Process
9355.3-09	03/30/90	Result of FY 89 Record of Decision Analysis Superfund Management Review Implementation Product - Recommendation # 25A
9355.3-11	02/02/91	Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites
9355.3-11FS	09/01/90	Streamlining the RI/FS for CERCLA Municipal Landfill Sites
9355.3-17	03/23/93	Compendium of ROD Language for FY 93 Focus Areas
9355.3-20	06/25/93	Revisions to OMB Circular A-94 on Guidelines & Discount Rates for Benefit-Cost Analysis
9355.4-01	08/15/90	Guidance on Remedial Actions for Superfund Sites w/PCB Contamination
9355.4-02	09/07/89	Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites
9355.4-02	08/29/91	Update on OSWER (Directive #9355.4-02, Sept. 1989) Soil lead Cleanup Guidance
9355.4-02A	01/26/90	Supplement to Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites
9355.4-03	10/18/89	Considerations in Ground Water Remediation at Superfund Sites
9355.4-07FS	01/01/92	Estimating Potential for Occurrence of DNAPL at Superfund Sites
9355.4-12	07/14/94	Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities

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<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9355.4-13	09/01/93	Evaluation of the Likelihood of DNAPL Presence at NPL Sites - National Results. Final Report
9355.4-14	09/01/93	Draft Soil Screening Level Guidance
9355.4-14FS	12/01/94	Soil Screening Guidance
9355.4-14FSA	07/01/96	Soil Screening Guidance: Fact Sheet
9355.4-15	07/14/94	Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil
9355.4-16		Draft Soil Screening Guidance: Issues Document
9355.4-17	11/01/94	Technical Background Document for Soil Screening Guidance
9355.4-17A	05/01/96	Soil Screening Guidance: Technical Background Document
9355.4-23	04/01/96	Soil Screening Guidance: User's Guide
9355.5-01	02/01/90	Interim Final Guidance on EPA Oversight of RD/RA Performed by PRPs (Pre-Publication Version)
9355.5-01	04/01/90	Interim Final Guidance on EPA Oversight of RD/RA Performed by PRPs
9355.5-01FS	09/01/89	ARCS Construction Contract Modification Procedures
9355.5-02	06/04/90	Guidance on Expediting Remedial Design and Remedial Action
9355.5-02FS	10/01/89	Expediting Remedial Construction
9355.5-03FS	05/01/90	Value Engineering
9355.5-05FS	12/01/89	USACE Preplaced and Rapid Response Contracts
9355.5-07FS	02/01/90	Real Estate Acquisition Procedures for USACE Projects
9355.5-14FS	05/30/90	EPA/USACE Payment Process, Direct Cite/Revised Reimbursement Methods
9355.5-16FS	02/01/90	EPA Oversight of RD/RA Performed by PRPs
9355.5-21FS	03/01/90	Scoping the Remedial Design
9355.6-06	12/01/90	ROD Annual Report: FY/92 (11/19/93)
9355.7	11/05/85	Data Quality Objectives for the RI/FS Process
9355.7-01	01/02/91	FY'91 Implementation Themes & Regional Coordination Plan for Superfund's Remedial & Enforcement Programs
9355.7-02	05/23/91	Structure and Components of Five-Year Reviews
9355.7-02A	07/26/94	Supplemental Five-Year Reviews Guidance
9355.7-03	02/19/92	Permits and Permit "Equivalency Processes for CERCLA On-site Response Actions
9355.7-03A	05/01/95	Estimated O&M Costs for Rods: Historical Trends and Projected Costs Through FY 2040

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DIRECTIVE #	DATE	TITLE
9355.7-03A	12/21/95	Second Supplemental Five-Year Review Guidance
9355.7-04	06/23/95	Land Use in the CERCLA Remedy Selection Process
9355.9-01	09/01/93	Data Quality Objectives Process for Superfund - Interim Final Guidance
9360.0-02B	04/01/88	Removal Cost Management Manual
9360.0-03B	02/01/88	Superfund Removal Procedures, Revision No. Three
9360.0-05	01/06/85	User's Guide for Removal Cost Management Software
9360.0-06	11/27/85	Draft - Relationship of the Removal & Remedial Programs under the Revised NCP
9360.0-06	03/17/86	Relationship of the Removal & Remedial Programs under the Revised NCP
9360.0-08	01/23/86	CERCLA Removal Actions at Methane Release Sites
9360.0-10 (*)	07/08/86	Expedited Response Actions
9360.0-12	04/06/87	Guidance on Implementation of the Revised Statutory Limits on Removal Actions
9360.0-12A	06/12/89	Final Guidance on Implementation of the "Consistency" Exemption to the Statutory Limits on Removal Actions
9360.0-13 (*)	04/06/87	Guidance on Implementation of the "Contribute to Remedial Performance" Provision
9360.0-14	02/07/87	Use of Expanded Removal Authority to Address NPL and Proposed NPL Sites
9360.0-15 (*)	04/21/87	The Role of Expedited Response Action Under SARA
9360.0-16A	07/25/88	Guidance for Conducting Federal-Lead Underground Storage Tank Corrective Action
9360.0-18	03/31/88	Removal Program Priorities
9360.0-19	03/03/89	Guidance on Non-NPL Removal Actions Involving Nationally Significant of Precedent-Setting Issues
9360.0-20	02/17/89	Required Use of the Removal Cost Management System for All Removal Actions
9360.0-23BFS	08/01/95	ERNS and CERCLA - Emergency Response Notification System (ERNS)
9360.0-29FSA	03/01/95	An Overview of Emergency Response Notification System (ERNS)
9360.0-32	08/06/93	Transmittal of Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA
9360.0-32FS	12/01/93	Conducting Non-Time-Critical Removal Actions Under CERCLA
9360.0-34	08/19/93	Determination of Imminent and Substantial Endangerment for Removal Actions
9360.0-36FS	03/01/95	ERNS and Site Searches
9360.0-37FS	03/01/95	ERNS Statistics
9360.1-01	10/06/87	Interim Final Guidance on Removal Action Levels at Contaminated Drinking Water Sites
9360.2-01	07/18/88	Model Program for Removal Site Management
9360.2-02	12/03/90	Policy on Management of Post-Removal Site Control

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<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9360.2-04	02/24/92	Authorization for Regional Administrators to Approve Consistency Exemptions at NPL Sites
9360.2-04A	06/03/92	Clarification of Delegation to Approve Consistency Exemptions at NPL Sites
9360.3-01	09/26/90	Transmittal of Advance Copy of Action Memorandum Guidance
9360.3-01	12/01/90	Superfund Removal Procedures Action Memorandum Guidance
9360.3-01FS	12/01/90	A Guide to Developing Action Memorandums
9360.3-02	09/01/91	Superfund Removal Procedures: Guidance on the Consideration of ARAs During Removal Actions
9360.3-02FS	04/01/92	Consideration of ARARs During Removal Actions
9360.3-03	06/01/94	Superfund Removal Procedures Removal Response Reporting: POLREPs and OSC Reports
9360.3-05	07/01/92	Superfund Removal Procedures Public Participation Guidance for On-Scene Coordinators: Community Relations and the Administrative Record
9360.3-06	04/01/92	Superfund Removal Procedures Removal Enforcement Guidance for On-Scene Coordinators
9360.3-06FS	07/01/92	A Guide to Removal Enforcement
9360.3-12	08/12/93	Response Actions at Sites with Contamination Inside Buildings
9360.3-14FS	06/01/94	Removal Response Reporting: OSC Reports
9360.3-15FS	06/01/94	Removal Response Reporting: POLREPS
9360.4-01	06/13/90	Quality Assurance/Quality Control Guidance for Removal Activities
9360.4-02	01/01/91	Compendium of ERT Soil Sampling & Surface Geophysics Procedures, Interim Final
9360.4-03	01/01/91	Compendium of ERT Surface Water & Sediment Sampling Procedures, Interim Final
9360.4-06	01/01/91	Compendium of ERT Groundwater Sampling Procedures, Interim Final
9360.4-07	01/01/91	Compendium of ERT Waste Sampling Procedures, Interim Final
9360.4-08	01/01/91	Compendium of ERT Toxicity Testing Procedures, Interim Final
9360.4-10	04/03/92	Removal Program's Representative Sampling Guidance Document: Volume 1 -- Soil
9360.4-12	02/04/12	CERCLA Reporting Requirements for Releases of Ethylene Glycol from Airplane De-Icing Operations
9360.5-00	06/02/89	Proposed Guidelines for the Cleanup of Clandestine Drug Laboratories
9360.7-01	10/25/90	Reporting Requirements for Continuous Releases of Hazardous Substances: A Guide for Facilities and Vessels on Compliance
9360.7-02	10/25/90	Continuous Release-Emergency Response Notification System: Users Manual for Industry
9360.7-14	01/01/95	Questions & Answers on Release Notification Requirements and Reportable Quantity Adjustments
9360.8-10	06/15/93	Interim Guidance for the Determination of Significant and Substantial Harm Facilities for

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<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
		011 Pollution Act Response Plans
9370.0-1	08/15/86	Preliminary FY 87 SPMS Targets
9375.0-01	05/08/89	Interim Final Guidance on Preparation of Superfund Memoranda of Agreement (SMOAs)
9375.1-06	07/12/87	Cooperative Agreements with Political Subdivisions for Remedial Response
9375.1-08	06/22/87	Role of EPA Personnel in the State Contractor Selection Process Under a Cooperative Agreement
9375.1-09	07/21/87	Interim Guidance on State Participation in Pre-Remedial and Remedial Response
9375.1-2A-e	12/16/85	Audits of Superfund Response Agreements: Proposed Addenda to State Participation in the Superfund Remedial Program Manual
9375.1-4	02/01/84	State Participation in the Superfund Remedial Program
9375.1-4-9	03/20/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Chapter IX. Audits of Superfund Cooperative Agreements
9375.1-4-10	12/17/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Chapter X. Closeout of Superfund Remedial Response Agreements
9375.1-4-c	05/02/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Appendix C - Documenting State CERCLA Credits & Advance Match
9375.1-4-C	12/31/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume 1: Appendix C - Documenting State CERCLA Credits & Advance Match
9375.1-4-f	01/05/87	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume 1: Appendix F - Sample Cooperative Agreement Provisions
9375.1-4-h	10/20/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume 1: Appendix H - Sample Articles for Superfund State Contracts
9375.1-4-k	03/24/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume 1: Appendix H - Community Relations Plan Format and Sample Plan
9375.1-4-l	02/07/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume 1: Appendix L - State Lead Quality Assurance Project Plan Guidance
9375.1-4-n	08/22/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume 1: Appendix N - How to Obligate CERCLA Funds for State & Federal-Lead Response
9375.1-4-p	03/06/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume 1: Appendix P - Superfund Supplemental Guidance
9375.1-4-T	11/21/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume 1:

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<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9375.1-4-U	09/11/86	Appendix T - Obtaining and Disposing of Equipment Under a CERCLA Cooperative Agreement STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume I: Appendix U - Cost Documentation Requirements for Cooperative Agreements
9375.1-4-W (*)	09/29/86	CERCLA Funding of State-lead Removals
9375.1-5	03/10/86	STATE PARTICIPATION IN THE SUPERFUND PROGRAM MANUAL Volume II: State Procurement Under Superfund Remedial Cooperative Agreements
9375.1-6	10/07/86	Draft Guidance for Cooperative Agreements with Political Subdivisions
9375.1-11	06/01/88	Guidance: Procurement Under Superfund Remedial Cooperative Agreements
9375.1-12	04/27/88	State Access to EPA Contractors During Remedial Response
9375.1-13	09/27/88	Clarification on Allowability of Management Assistance to States for ERAs and Removals
9375.2-01	12/18/87	Final Guidance on State Core Program Funding Cooperative Agreements
9375.2-03	08/02/88	Funding for State Core Program Cooperative Agreement State-Specific Additional Functions
9375.2-04	07/19/89	Core Program Cooperative Agreements and Small/Disadvantaged Business Utilization in the Superfund Program]
9375.5-01	03/10/89	40 CFR Part 35 Subpart O. Cooperative Agreements and Superfund State Contracts for Superfund Response Actions
9375.5-02	10/18/89	Interim Final Guidance on Indian Involvement in the Superfund Program
9375.5-02A	11/28/89	Revised Interim Final Guidance on Indian Involvement in the Superfund Program
9375.5-03	05/01/89	Political Subdivision-Lead for Remedial Response
9375.5-03FS	04/01/90	Political Subdivision Involvement in Superfund
9375.5-04	02/12/90	Involvement of Superfund Program Managers in Superfund Response Agreement Audits
9375.6-08A	09/01/90	An Analysis of State Superfund Program: 50-State Study. 1990 Update
9375.6-11	05/03/95	Guidance on Deferral of NPL Listing Determinations While States Oversee Response Actions
9375.6-11A	05/03/95	Response to Comments on the 1988 Proposed NCP Deferral Policy Concept
9375.7-01	03/29/93	Ensuring the Adequacy of Cost Share Provisions in Superfund State Contracts
9375.7-02	08/05/93	Obligation of Funds Under Superfund State Contracts
9380.0-05	11/01/85	Leachate Plume Management
9380.0-06	07/17/86	Guidance Document for Cleanup of Surface Impoundment Sites
9380.0-08	09/01/88	Field Screening Method Catalog (USER'S GUIDE)
9380.0-3	05/28/95	Guidance Document for Cleanup of Surface Tank & Drum Sites
9380.0-13	09/01/85	Covers for Uncontrolled Hazardous Waste Sites

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9380.0-16	09/01/89	Forum on Innovative Hazardous Waste Treatment Technologies: "Technical Papers" Domestic & Int'l (6/19-21/89). Atlanta, GA
9380.0-17	06/10/91	Furthering the Use of Innovative Treatment Technologies in OSWER Programs
9380.0-17FS	08/10/91	Furthering the Use of Innovative Treatment Technologies in OSWER Programs
9380.0-19	01/01/91	Innovative Treatment Technologies: Semi-Annual Status Report (No. 1)
9380.0-25	04/29/96	Initiatives to Promote Innovative Technology in Waste Management Programs
9380.0-46	07/01/89	Terra Vac In Situ Vacuum Extraction System Applications Analysis Report
9380.1-02	10/01/87	Hazardous Waste Bibliography
9380.1-03FS	07/01/90	Superfund Innovative Technology Evaluation Program - Site Program FS
9380.1-04	08/01/90	CF Systems Organics Extraction Process - Applications Analysis Report, New Bedford Harbor, MA
9380.1-06	05/01/91	Synopses of Federal Demonstrations of Innovative Site Remediation Technologies
9380.1-1	09/16/86	Superfund Technology Transfer Program, Draft
9380.1-13	06/01/91	Survey of Materials-Handling Technologies Used at Hazardous Waste Sites
9380.1-14	11/01/90	Technical Support Services for Superfund Remediation, 2nd Edition
9380.2-02	07/01/87	SUPERFUND INNOVATIVE TECHNOLOGY EVALUATION (SITE) Operations Plan
9380.2-06	03/22/88	SUPERFUND INNOVATIVE TECHNOLOGY EVALUATION (SITE) Program Requirements
9380.2-3	12/01/86	SUPERFUND INNOVATIVE TECHNOLOGY EVALUATION (SITE) Strategy and Program Plan
9380.3-01	07/12/89	Treatability Studies Contractor Work Assignments
9380.3-02	12/28/89	Treatability Studies Under CERCLA
9380.3-02FS	12/01/89	Treatability Studies Under CERCLA
9380.3-03	12/28/89	Inventory of Treatability Study Vendors
9380.3-03	03/01/90	Inventory of Treatability Study Vendors: Vol. II
9380.3-04	11/30/89	Analysis of Treatability Data for Soil & Debris: Evaluation of Lan Ban Impact on the Use of Superfund Treatment Technologies
9380.06FS	11/01/91	A Guide to Principal Threat & Low Level Threat Wastes
9380.3-38	05/01/89	Hazcon Solidification Process - Applications Analysis Report, Douglassville, PA
9380.4-01	03/12/90	Use of ORD's Bioremediation Expertise in Superfund Removal Programs
9380.5-01A	07/01/89	AIR/SF NAT'L TECHNICAL GUIDANCE STUDY SERIES: Vol. I. "Application of Air Pathway Analyses for Superfund Activities" - Interim Final
9380.5-01B	08/01/90	AIR/SF NAT'L TECHNICAL GUIDANCE STUDY SERIES: Vol. II. "Estimation of Baseline Air

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9380.5-01C	01/01/89	Emissions at Superfund Sites" - Revised Edition AIR/SF NAT'L TECHNICAL GUIDANCE STUDY SERIES: Vol. III, "Estimation of Air Emissions from Cleanup Activities at Superfund Sites" - Interim Final
9380.5-01D	07/01/89	AIR/SF NAT'L TECHNICAL GUIDANCE STUDY SERIES: 121. IV. "Procedures for Dispersion Modeling & Air Monitoring for Superfund Air Pathway Analysis" - Interim Final
9380.5-04	05/01/90	Air Stripper Design Manual
9380.5-05	07/01/90	AIR/SF NAT'L TECHNICAL GUIDANCE STUDY SERIES: Development of Example Procedures for Evaluating the Air Impacts of Soil Excavation Associated w/ Superfund Remedial Actions
9380.5-09	11/01/89	Area Source Dispersion Algorithms for Emission Source at Superfund Sites
9380.5-10	09/01/89	Soil Vapor Extraction VOC Control Technology Assessment
9380.5-12	05/01/90	User's Guide for the Fugitive Dust Model
9380.5-13	03/01/90	Comparisons of Air Stripper Simulations & Field Performance Data
9380.6-01	09/20/90	Transmittal of Solvent Extraction Engineering Bulletin
9380.6-01A	09/20/90	Engineering Bulletin: Solvent Extraction Treatment
9380.6-01B	09/20/90	Engineering Bulletin: Mobile/Transportable Incineration Treatment
9380.6-01C	09/20/90	Engineering Bulletin: Chemical Dehalogenation Treatment:Apeg Treatment
9380.6-01D	09/20/90	Engineering Bulletin: Slurry Biodegradation
9380.6-01E	09/20/90	Engineering Bulletin: Soil Washing Treatment
9380.6-01F	05/01/90	Engineering Bulletin: In Situ Steam Extraction Treatment
9380.6-01G	05/01/91	Engineering Bulletin: In Situ Soil Vapor Extraction Treatment
9380.6-01H	05/01/91	Engineering Bulletin: Thermal Desorption Treatment
9380.7-01	03/01/90	Basics of Pump-and-Treat, Groundwater Remediation Technology
9380.7-02A	03/01/89	Superfund Ground Water Issue - Ground Water Sampling of Metals Analyses
9380.7-02B	03/01/91	Superfund Ground Water Issue - Characterizing Soils for Hazardous Waste Site Assessments
9380.7-02C	03/01/91	Superfund Ground Water Issue - Dense Nonaqueous Phase Liquids
9380.7-03A	04/01/91	Superfund Engineering Issue: Treatment of Lead-Contaminated Soils

* * * RCRA (OSW) * * *

9410.00-1 02/01/85 Draft Guidance on Implementation of Minimum Technology Requirements and Corrective Action

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DIRECTIVE #	DATE	TITLE
		Requirements of the Hazardous and Solid Waste Amendments of 1984
9410.00-2	06/01/86	EPA Guide for Infectious Waste Management
9420.00-01	05/19/86	FY'87 RCRA Implementation Plan
9420.00-03	10/16/85	FY'86 PA/SI Strategy - Addendum to the FY'86 RIP
9420.00-04	03/31/87	FY'88 RCRA Implementation Plan
9420.00-05	04/05/88	FY'89 RCRA Implementation Plan
9420.00-07	05/06/91	FY'92 RCRA Implementation Plan
9420.00-08	04/27/92	FY'93 RCRA Implementation Plan
9420.00-09	04/02/93	FY'94 RCRA Implementation Plan
9420.00-09a	04/02/93	FY'94 RCRA Implementation Plan Addendum
9420.00-10	05/19/94	FY'95 RCRA Implementation Plan Addendum
9431.01(84)	09/10/84	Permit Policy Question and Answer Quarterly Report
9432.00-01	02/11/86	Totally Enclosed Treatment Facilities Exemption for Bag House Sludge
9432.00-1	02/01/88	Totally Enclosed Treatment System Proposal TDJ Group, Inc.
9432.00-2	03/02/87	Joint EPA/NRC Guidance on the Definition & Identification of Commercial Mixed Low-Level Radioactive and Hazardous Waste
9432.01(80)	12/30/80	RCRA Regulation of Aerosol Cans
<u>9432.01(81)</u>	06/28/81	Definition of "Liquid Waste"
9432.01(83)	02/18/83	Regulatory Clarification of Totally Enclosed Treatment Facility
9432.01(84)	01/27/84	Determination of Operator at the DOE Oak Ridge Facility
9432.01(85)	06/26/85	Definition of Treatment
9432.02(81)	07/27/81	Totally Enclosed Treatment Facilities
9432.02(83)	11/29/83	Recent Court Decisions on RCRA Applicability to Storage Facilities
<u>9432.02(84)</u>	02/02/84	Regulation of Hazardous Aqueous Waste at Wastewater Treatment Facilities
<u>9432.03(84)</u>	04/26/84	Permit Policy for Decanning & Crushing Operations
9432.04(85)	08/30/85	Certification of "Existing Units" Under HSWA
<u>9432.05(84)</u>	11/06/84	Definition of Treatment as Defined in 40 CFR §260.10 Subpart B - Definition
9432.07(84)	12/24/84	Guidance on Implementation of Wastewater Treatment Unit Exemption
9433.00-01	04/16/86	RCRA §3001(f)(2)(B) and States Exclusion of Wastes from Regulation as Hazardous
9433.00-2A	04/30/86	Determination of Regulatory Status-Light Bulbs
9433.00-3	08/11/82	Concurrence on Responses to Pennsylvania Der Delisting Activities

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DIRECTIVE #	DATE	TITLE
9433.01(83)	11/14/83	Withdrawal of a Facility's Delisting Petition
9433.01(84)	02/08/84	Changes Regarding the Delisting Review Procedures
9433.02(84)	08/08/84	Response to Questions from State Pesticide Personnel Deregulating Decontaminated Water
9433.02(85)	05/16/85	RCRA RSI #4: Effect of HSWA on State Delisting Decisions
9433.03(84)	10/23/84	Delisting of Spent Pickle Liquor Generated from the Porcelain Enamel Industry
9433.05(84)	12/11/84	Test Methods & Standards to Evaluate Cyanide Level in Inorganic Wastes
9433.06(84)	12/18/84	Issues Regarding a Delisting Petition
9433.07(84)	12/21/84	Information Required for Review of Delisting Petitions
9434.00-6	12/10/80	Effect of EPAs MOU with the DOT on Activities in States with Cooperative Agreements (PIG-81-9)
9435.00-1	11/03/87	Procedures for Developing Regulations & Guidance Documents
9440.00-1	01/07/87	Guidance on the Definition & Identification of Radioactive Mixed Wastes
9441.00-02	03/01/86	Guidance Manual on the RCRA Regulation of Recycled Hazardous Waste
9441.01(80)	05/30/80	Hazardous Waste Regulation of Empty Drums for Reuse & Reconditioning
9441.01(81)	01/13/81	Interpretation of the Fossil Fuel Combustion Waste Exclusion in §261.4(b)(4)
9441.01(82)	07/07/82	Interpretation of the Farmer Exemption Under 40 CFR §261.51
9441.01(84)	01/06/84	Determining if the Soils from Missouri Dioxin Sites are Hazardous
9441.01(85)	01/11/85	Impact of the RCRA Regulations on Landfill Gas Condensate
9441.01(91)	07/05/91	Applicability of the "Mixture" Rule to Petroleum Refinery Wastewater Systems
9441.02(80)	08/19/80	Agricultural Waste Exclusion
9441.02(81)	02/18/81	EPA Regulation of Utility Waste
9441.02(83)	04/19/83	Subtitle C Exclusion of Drilling Fluids and Produced Waters
9441.02(85)	01/16/85	Exclusion of Sodium Azide in Air Bag Canisters of Obsolete Automobile Hulks from RCRA Regulations
9441.03(80)	09/04/80	Exemption of Certain Waste From Drilling Operations
9441.03(81)	04/06/81	Paint Wastes as Hazardous Wastes
9441.03(83)	05/26/83	Scope of Oil and Gas Waste Exemption in §3001(b)(2)(A) of RCRA: "Iron Sponge" Process
9441.03(84)	02/16/84	Residue from a Reclamation Operation
9441.03(85)	01/23/85	Clarification of the Laboratory Waste Exclusion
9441.04(80)	11/17/80	Railroad Ties as Hazardous Wastes Under the Mixture Rule
9441.04(81)	04/10/81	Interpretation of 40 CFR §261.6(b) As It Applies to the Reuse of "Red Water" from TNT

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		Production
9441.04(83)	06/06/83	Disposal of Outdated Ordinance by Incineration
9441.05(80)	11/17/80	Small Quantity Generator
9441.05(81)	04/14/81	Treatment of Listed Waste
9441.05(83)	07/12/83	Exemptions from Presumption of Hazardousness
9441.05(84)	02/19/84	Listing of Residue from the Treatment of a Listed Hazardous Waste
9441.05(85)	02/04/85	Exemption of Waste Streams Resulting from Extraction, Beneficiation, or Processing of An Ore or Mineral
9441.06(81)	06/09/81	Operation of the Mixing Rule
9441.06(84)	04/10/84	Regulatory Status of Mixtures of Spent Solvents - F001-F005
9441.06(85)	02/13/85	Use/Reuse Provisions in the Definition of Solid Waste Rulemaking
9441.07(84)	03/19/84	Exclusion of Household Wastes
9441.07(85)	02/13/85	Exclusion of Laboratory Wastes from Dioxin Regulation
9441.08(83)	10/21/83	Leachate From a Municipal Landfill
9441.08(84)	05/03/84	Emission Control Dust/Sludge Generated from Electric ARC Furnaces
9441.08(85)	02/22/85	Use of a Secondary Wastewater Treatment System to Remove biological Solids from an Activated Sludge Unit
9441.09(84)	05/09/84	Status of Mining Laboratory Wastes Under 40 CFR 261.4(b)(7)
<u>9441.10(83)</u>	12/13/83	Triple Rinsing of Containers
9441.10(84)	05/15/84	Regulatory Status of Residue from Stream-Stripping of Process Waste Containing Toluene
9441.10(85)	04/10/85	Perchloroethylene Residue as a Hazardous Waste
9441.11(85)	04/30/85	Generation of Dioxin Wastes from a Labs Analytical Procedures
9441.12(84)	06/04/84	Status of Supernatant From Lime Neutralization of Spent Pickle Liquor
9441.12(85)	05/13/85	Zinc Plating (Segregated Basis) on Carbon Steel
9441.13(85)	05/15/85	Disposal of Waste Electrolyte from Rechargeable Nickel-Cadmium Batteries with a Potassium Hydroxide Electrolyte
9441.14(85)	05/16/85	Clarification of Mining Waste Exclusion
9441.15(84)	07/31/84	Existing and Proposed Regulations Addressing RCRA's Coverage of Incinerators that Receive Gaseous Emissions
9441.15(85)	05/20/85	Emptying Hazardous Waste from Paper Bags
9441.18(85)	05/21/85	Determination of Primary SIC Code for a Facility

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9441.19(84)	08/15/84	Mineral Processing Residuals Generated by Combustion Units Burning Hazardous Waste Fuel
9441.19(85)	05/31/85	Empty Drums Containing Metallic Nickel or Nickel Oxide
9441.20(84)	08/16/84	Clarification of Exemptions Enacted in 1980 RCRA Amendments
9441.20(85)	06/05/85	Use/Reuse Exemption as Applied to Spent Pickle Liquor
9441.21(85)	06/06/85	Regulatory Status of Brass Dross Skimmings
9441.23(85)	06/27/85	Disposal Requirements of Scrap DEHP and Small Capacitors Containing DEHP
9441.24(84)	09/06/84	Delisting of Waste Generated from Zinc Phosphating on Carbon Steel - F006 (Wastewater Treatment Sludges from Electroplating Operations)
9441.24(85)	06/27/85	Clarification of Recycling Under Revised Solid Waste Rules
9441.25(84)	09/10/84	Definition of "Empty Container"
9441.25(85)	07/01/85	Scope of the Term "Abandoned" under Revised 40 CFR 261.2
9441.26(84)	09/11/84	Definition of "Empty Container" Removal Methods
9441.26(85)	07/05/85	Dioxin-Containing Laboratory Waste
9441.27(84)	09/20/84	Regulatory Status of Dibutyltin Difluoride
9441.27(85)	07/16/85	Status of Spent Pickle Liquor Used in Production of Ferric Chloride
9441.28(85)	07/16/85	Regulatory Status of Creosote Treated Cross Ties
9441.29(84)	09/24/84	Zinc Plating (Waste Streams)
9441.29(85)	08/23/85	Applicability of "Mixture" and "Derived From" Rules to Petroleum Refinery Wastewater Systems
9441.30(84)	10/22/84	Contamination of Used Oil Through Normal Use of Through Purposeful Mixing With Hazardous Wastes
9441.31(84)	10/25/84	Clarification of Federal Register Notice Pertaining to Lime-Stabilized Waste Pickle Liquor Sludge (LSWPLS) from the Iron and Steel Industry (6/5/84)
9441.32(84)	11/07/84	Clarification of RCRA Regulations on Hazardous Characteristic
9441.34(84)	11/28/84	Empty Container Rule
9441.35(84)	12/07/84	Regulations Applicable to Oil/Water Emulsions Generated by Refinery Wastewater Systems
9441.36(84)	12/17/84	RCRA Implications of Treating Gases Vented from Compressed Cylinders
9441.37(84)	11/14/84	Clarification of Policy on Hazardous waste Derived from Mixture of Leachate & Precipitation Run-off at Landfills, Waste Piles and Land Treatment Units
9441.50-01A	11/20/86	RCRA Exclusions under §3001(b)(2)(A) of RCRA as Applied to Hydrogen (H ₂ S) Sulfide Scrubber Wastes from Geothermal Power Plants

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9442.01(84)	02/07/84	Listing of Spent Iron Sponge as a Hazardous Waste
9443.00-01A	04/21/86	Evaluating the Ignitability of Physical Solids
9443.00-02A	04/30/86	Determination of Regulatory Status-Light Bulbs
9443.01(80)	09/15/80	Corrosivity as It Applies to Solid Waste
9443.01(81)	06/17/81	Sufficient Agitation for the Extraction Procedure Toxicity Test
9443.01(83)	01/10/83	Definition of Ignitable Solids
9443.01(84)	03/01/84	Lithium-Sulfur Dioxide Battery. RIL
9443.01(85)	02/21/85	Management of Excavated Construction Soil Containing Quantities of Volatile Organic Compounds
9443.02(80)	09/16/80	The Impact of Hazardous Waste Regulations on Food Processors
9443.02(84)	03/07/84	Regulatory Status of Spent and/or Discarded Lithium-Sulfur Dioxide (Li/SO ₂) Batteries
9443.02(85)	02/26/85	Clarification of the Definition of the Characteristic of Ignitability for Hazardous Wastes
9443.03(80)	12/22/80	Hazardousness of Paint Residues on Conveyor Hooks
9443.03(84)	06/04/84	Listing of Agents GB, VX, and HX
9443.03(85)	04/22/85	Reactivity Test Methods
9443.04(83)	07/05/83	Regulation of Phosphate Wastes and Gas Processing Industry Wastes
9443.04(85)	07/16/85	Clarification of the Sulfide Reactivity Characteristics
9443.05(83)	07/27/83	Hazardous Waste Identification Regulations as They Apply to Waste Batteries and Cells
9443.05(84)	09/11/84	Blasting Caps as Reactive Wastes
9443.05(85)	07/22/85	Regulation Interpretation for Pesticide Applicator Washing Rinse Water
9443.06(85)	07/31/85	Notes on RCRA Methods and QA Activities
9443.07(85)	09/18/85	Permit Requirements Applicable to a Water/Methanol Mixture
9443.08(84)	11/23/84	Designation for Waste Ink and Solvent Mixtures Generated from Printing Facilities
9443.09(84)	11/29/84	Hazardous Waste Identification: Three Questions
9443.10(84)	11/30/84	Classification of Small Arms Ammunition with Respect to Reactivity
9443.11(84)	12/03/84	Evaluation of EP Toxicity on the Basis of Total Chromium
9444.01(80)	09/04/80	Interpretations of §261.33
9444.01(81)	03/12/81	Manufacturing Wastes Containing 261.33 Compounds
9444.01(82)	09/15/82	Regulation of Paint Filters
9444.01(83)	06/10/83	Interpretation of RCRA Hazardous Waste Regulations as Pertaining to Spent Solvent Listings

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		and the Status of Leachate From Sanitary Landfills that have Received Hazardous Waste
9444.01(84)	03/05/84	Clarification of the Listings for Metal Heat Treating Wastes F010, F011, and F012
9444.02(80)	11/13/80	Wastewater from Refineries
9444.02(81)	05/19/81	Hazardous Waste Listing P120
9444.02(83)	07/11/83	Scope of the Listing K061, Emission Control Dust/Sludge from the Primary Production of Steel in Electric Furnaces
9444.02(85)	03/04/85	Applicability of the RCRA Dioxin Listings Published in the Federal Register on 1/14/85, to Wastes from Wood Preserving Processes Using Pentachlorophenol
9444.03(80)	11/17/80	RCRA Regulation of Wastes from Storage of Petroleum Products
9444.03(81)	06/06/81	Clarification of Hazardous Waste Listing K052
9444.03(83)	07/20/83	Hazardous wastes from Solar Cell and High Tech Industries
9444.03(84)	04/10/84	Toxicity of 2,4-D Waste
9444.03(85)	04/01/85	Identification of F Solvent Wastes
9444.04(81)	06/22/81	Freon TF Recovery Still Bottoms
9444.04(84)	04/26/84	Wastewater Treatment Sludges from Wood Preserving Processes Using Creosote and/or Pentachlorophenol
9444.04(85)	04/10/85	Guidance on the Management of Dioxin Wastes
9444.05(80)	11/18/80	Asbestos as a Hazardous Waste
9444.05(81)	09/16/81	Pesticides Containing A \$261.33(e) Compound
9444.05(85)	05/14/85	Discarded Commercial Chemical Products
9444.06(80)	12/02/80	Application of K061 Hazardous Waste Listing to Steel Foundries
9444.07(84)	05/30/84	Ballast Fluid Classification
9444.07(85)	05/17/85	Exclusion from RCRA Requirements of Used Embalming Fluids
9444.08(84)	06/06/84	Clarification of RCRA Hazardous Waste Identification Regulation as They Apply to Deodorants for Portable Toilets
9444.08(85)	05/24/85	Wastes Containing Unreacted Materials are not Listed Spent Solvents
9444.09(84)	06/13/84	Zinc Plating (Segregated Basis) on Carbon Steel
9444.09(85)	06/03/85	Toluene-Laden Filter Residue Generated from an Ink Production Process
9444.10(84)	07/25/84	Regulation of Wastewater Treatment Effluent from Processes that Generate K001 & F006 Wastewater Treatment Sludge

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9444.10(85)	06/05/85	Delisting of Process Water Resulting from Incineration of Dioxin-Contaminated Wastes
9444.11(84)	07/27/84	Clarification of K062 - Spent Pickle Liquor Listing
9444.11(85)	06/19/85	Status of Ion Exchange Resin from Metal Removal from Electroplating Rinse
9444.12(84)	07/30/84	Regulatory Status of Spent Acid from Electro-polishing of Stainless Steel
9444.13(84)	07/30/84	Michigan Petition Sb ₂ O ₃ Listing
9444.13(85)	09/03/85	Application of the F006 Listing to Wastewater Treatment Sludges from Electroplating Operations
9444.14(84)	07/30/84	Dragout from EPA Hazardous Wastes No. F007 - Spent Cyanide Plating Bath Solutions from Electroplating Operations (Except for precious metals electroplating spent cyanide plating bath solutions)
9444.14(85)	09/10/85	Disposal of Dioxin Containing Waste Rinsates by Deep Well Injection
9444.15(84)	08/08/84	Response to Questions from State Pesticide Control Office: What is Distribution Criteria for Waste with Only 1 Active Ingredient
9444.15(85)	06/24/85	Regulatory Status of Nalcast 6015/Water/Wax Mixture
9444.16(85)	09/26/85	Clarification of January 14, 1985, Dioxin Ruling
9444.18(84)	10/04/84	Listing of Spent Cartridges Containing Perchloroethylene from Dry Cleaning Establishments
9445.01(84)	04/23/84	Notes on RCRA Methods & Quality Assurance Activities
9445.01(85)	04/05/85	Regulating Status of Soil Contaminated with Toluene
9445.02(84)	04/23/84	Topics Relating to RCRA Methodology and Quality Assurance (QA) Activities
9445.02(85)	04/23/85	Notes on RCRA Methods and QA Activities
9445.03(84)	05/25/84	Analytical Methods for Petroleum Refining Residues and Wastes
9445.03(85)	05/31/85	Clarification of F019 Listing
9445.04(84)	11/19/84	EPA-Approved Waste Analyses Test Methods
9445.04(85)	06/01/85	Notes on RCRA Methods and QA Activities
9445.05(84)	12/20/84	RCRA Methods and Quality Assurance (QA) Activities
9445.05(85)	01/18/85	Analytical Methods to Determine the Presence of Creosote and Its Toxic Characteristics
9450.00-01	04/01/86	Implementation Strategy for Small Quantity Generators of 100-1000 KG/Month
9451.00-1A	02/05/86	Letter to Vice Admiral Peter J. Rotz concerning the interaction between Marpol and RCRA regulations from Marcia Williams
9451.01(80)	11/05/80	Liability of a Servicing Company as a Generator of Hazardous Waste
9451.01(85)	03/01/85	Waste Exchange Programs

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9451.02(80)	11/18/80	Multiple Generator Liability
9451.02(84)	09/04/84	Responsibility of Generator in Hazardous Waste Determinations
9451.02(85)	07/30/85	Activities that Constitute Hazardous waste Generation
9452.02(84)	10/25/84	Violation of EPA Hazardous waste Manifest Regulations by Federal Facilities
9453.01(82)	08/31/82	90-Day Accumulation of Hazardous Waste in Tanks
9453.01(84)	05/18/84	Applicability of EPA's Hazardous Waste Marking Requirement (262.32) to State-Regulated Wastes
9453.02(85)	03/12/85	Exclusion from RCRA Permitting Requirements for Less Than 90-Day Accumulators of Dioxin-Containing Wastes
9453.03(85)	06/10/85	Intent of 40 CFR 262.34 on 90-Day Accumulation Time
9454.00-1A	05/23/86	Submission of Waste Minimization Information
9455.01(85)	06/25/85	Generator Responsibilities for Importation of Hazardous Waste
9461.01(85)	09/19/85	Building and Consolidating Shipments of Compatible Wastes with Different Hazardous Codes
9463.01(80)	06/18/80	Department of Transportation Role in the Transportation of Hazardous Waste
9463.02(80)	11/26/80	Program Implementation Guidance on Issuance of Provisional EPA Identification Numbers (PIG-81-8)
9471.00-01a	04/15/91	Assurance of Hazardous Waste Capacity Guidance to State Officials
9471.03(84)	09/06/84	Regulation of Tanks Used for Emergency Containment
9471.05(84)	11/21/84	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
9472.00-1	02/01/85	Permit Writers' Guidance Manual for Hazardous Waste Land Storage and Disposal Facilities Phase I: Criteria for Location Acceptability and Existing Applicable Regulations
9472.00-02A	07/01/86	Statutory Interpretative Guidance: Criteria for Identifying Areas of Vulnerable Hydrogeology
9472.00-03	07/01/86	Technical Guidance Document: Construction Quality Assurance for Hazardous Waste Land Disposal Facilities
9472.03(83)	12/13/83	Waste Analysis Requirements at Off-Site Storage Facilities
9474.01(84)	09/10/84	Permit Policy Question and Answer Quarterly
9476.00-01	09/01/82	Evaluating Cover Systems for Solid and Hazardous Waste
9476.00-02	09/01/82	Closure of Hazardous Waste Surface Impoundments
9476.00-03	05/07/82	Financial Assurance for Closure and Post-Closure Care: Requirements for Owner/Operator of .

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9476.00-05	01/01/87	Hazardous Waste Treatment, Storage & Disposal Facilities RCRA Guidance Manual for Subpart G Closure and Post-Closure Care Standards and Subpart H Cost Estimating Requirements
9476.00-06	11/01/86	Final Report/Guidance Manual: Cost Estimates for Closure & Post-Closure Plans (Subparts G&H) Vols. I-IV
9476.00-07	12/30/86	RCRA Policy Compendium for Subparts G and H
9476.00-08	03/31/87	Surface Impoundment Clean Closure Guidance Manual
9476.00-09	04/14/87	Part 265 Land Treatment Closure/Post Closure Guidance
9476.00-12	02/02/88	Closure Requirements
9476.00-13	02/08/88	Regulatory Interpretation of the Closure Performance Standard
9476.00-14	03/31/88	Ground-Water Monitoring at Clean Closing Surface Impoundment and Waste Pile Units
9476.00-16	04/01/89	Effective Dates for Characteristic and Listed Wastes per March 19, 1987 Clean Closure Regulation
9476.00-18	05/12/89	Guidance on Demonstrating Equivalence of Part 265 Clean Closure with Part 264 Requirements
9476.00-22	11/01/82	Liability Coverage - Requirements for Owners or Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
9476.02(83)	01/11/83	Interpretation of Closure and Post-Closure Requirements Regarding Hazardous Waste Treatment, Storage and Disposal Facilities
9476.02(85)	08/27/85	RCRA Policies on Ground-Water Quality at Closure
9476.03(85)	10/11/85	Permitting Units Created for Facility Closure
9476.04(83)	08/10/83	Trip Report: Region X - Closure Standards for Disposal Facilities
9476.04(84)	08/07/84	Closure Issues Related to Wood Preserving Plants
9476.04(85)	10/25/85	Applicability of Post-Closure Permitting Requirements to Non-Regulated Units
9476.05(83)	08/17/83	Definitions for Data Element Dictionary
9476.05(84)	09/18/84	Closure Activities
9477.00-04	03/02/87	Liability Requirements for Facilities Seeking a RCRA Permit
9477.00-05	11/23/87	Risk Retention Groups and Financial Assurance Requirements
9477.00-06	12/29/87	Guidance for Reviewing Exclusions for Pre-Existing Conditions in RCRA TSDF Insurance Policies
9477.01(82)	05/24/82	Part B Financial Responsibility information Requirements for Owners or Operators in States with Only Phase I Authorization

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9477.01(83)	01/05/83	Applicability of the Subpart H Financial Responsibility Requirements
9477.01(84)	01/12/84	Closure Cost Estimates Based on Third Party Costs
9477.02(84)	01/30/84	EPA Authority to Enforce Subpart H Compliance at Facilities Located on State-Owned Land
9477.03(82)	10/08/82	Clarification of Intended Meanings in Hazardous Waste Facility Certificates of Liability Insurance
9477.04(84)	11/20/84	Insura (Summary of Requirements)
9935.0	03/14/81	Interim Status Under §3005(e) of RCRA
9935.1	07/31/81	§3005(e) of RCRA Operation of Hazardous Waste Facilities by Owners or Operators Who have Failed to Achieve Interim Status
9936.0	11/29/84	Part B Permit Applications with Insufficient Groundwater Monitoring Data
9936.1	09/09/83	Guidance on Compliance Orders for failure to Submit & Submittal of Incomplete Part B Permit Application
9936.2	02/19/87	Final Administrative Hearing Procedures for RCRA §3008(h) Orders
9936.3	01/24/89	Enforcement of Authorized State Laws Pursuant to 40 CFR §271.19 - Formal Comments on State Requirements Applicable to Facility Permits
9938.0	04/17/86	Inspection Authority Under §3007 of RCRA
9938.02b	10/01/93	Revised RCRA Inspection Manual (1993 Edition)
9938.1	04/01/87	Compliance Review Guidance for the Land Disposal Restrictions Rule for Solvents
9938.2A	04/22/88	RCRA Inspection Manual
9938.3	07/13/88	RCRA Technical Case Development Guidance Document
9938.4	10/06/88	Inspection Manual for Hazardous Waste Storage & Treatment Tank Systems (not releasable to public under Exemption 7 of FOIA)
9938.4-03	04/26/94	Waste analysis at Facilities that Generate, Treat, Store & Dispose of Hazardous Wastes (A Guidance Manual)
9938.5	01/23/89	Enforcement Strategy for the Land Disposal Restrictions First Third Rule (not releasable to public under Exemption 7 of FOIA)
9938.7	09/28/84	RCRA Compliance/Enforcement Guidance Manual
9938.9	07/01/91	Conducting RCRA Inspections at Mixed Waste Facilities
9938.12	03/01/93	Toxicity Characteristic Rule Enforcement Training Manual
9938.13	12/17/93	Procedures for Recovering Costs Incurred During Implementation of RCRA Requirements of the Federal Facility Compliance Act (FFCA) of 1992

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9938.14	03/14/94	Transmittal of Used Oil Management Inspection/Enforcement Strategy
9939.0	05/19/86	Guidance on RCRA Overfilling
9940.0	07/28/81	Use of RCRA §3008(g) Independently of §3008(a)
9940.1	09/26/84	Issuance of Administrative Orders Under §3013 of RCRA
9940.2	09/21/84	Issuance of Final Revised Guidance on the Use of Issuance of Administrative Orders Under §7003 of RCRA
9940.3	06/26/87	Criteria for Eliminating Headquarter's Concurrence on RCRA §3008(h) Orders
9940.4	07/06/89	Guidance on Administrative Records for RCRA §3008(h) Actions
9943.3-1a	12/30/86	Enforcement of the UST Interim Prohibition
9943.3	09/16/86	Enforcement Strategy & Procedures for the "Interim Prohibition" §9003(g) of SWDA
9945.1	10/01/86	Guidance Concerning EPA Involvement in RCRA §7002 Citizen Suits
9946.1	02/08/88	RCRA State Oversight Inspection Guide (not releasable to public under Exemption 7 of FOIA)
9950.1	09/09/86	RCRA Ground-Water Monitoring Technical Enforcement Guidance Document
9950.1a	07/01/88	Executive Summary - RCRA Ground-Water Monitoring Technical Enforcement Guidance Document
9950.2	12/01/86	Final RCRA Comprehensive Ground-Water Monitoring Evaluation Guidance Document
9950.3	03/30/88	RCRA Comprehensive Ground-water Monitoring Evaluation Document (RCRA Ground-Water Monitoring Systems, not releasable to public under Exemption 7 of FOIA)
9951.1	12/30/86	Transmittal of the Final Waste Oil Interim Enforcement Guidance Document
9971	07/25/86	FY'87 SPMS Targets for RCRA Enforcement
9972.00	02/22/94	Regional Project Officers, Headquarters Zone Project Officers, Contracting Officers, and Work Assignment Managers Roles & Responsibilities
9990.0	06/22/83	RCRA Regulation of Wastes Handled by DOE Facilities
9992.0	01/25/88	Enforcement Actions Under RCRA & CERCLA at Federal Facilities
9992.1a	03/24/88	Elevation Process for Achieving Federal Facility Compliance under RCRA
9992.1	05/27/88	Agreement With the Department of Energy -- Model Provisions for CERCLA Federal Facilities Agreements
9992.2	06/17/88	Agreement with the Department of Defense -- Model Provisions for CERCLA Federal Facilities Agreements
9992.3	08/10/89	Federal Facilities Negotiations Policy
9992.4	01/09/90	Federal Facilities Hazardous waste Compliance Manual
81.15(84)	11/20/84	Definition of Regulated Units

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9481.16(84)	12/26/84	RCRA Regulatory Status of Contaminated Groundwater
9481.17(84)	12/27/84	Analytical Methods for Appendix VIII Constituents
9483.00-01	12/01/86	Technical Resource Document for the Storage & Treatment of Hazardous Waste in Tank Systems
9483.00-02	02/01/87	Technical Resource Document for Obtaining Variances from the Secondary Containment Requirement of Hazardous Waste Tank Systems. Vol. 2: Risk-Based Variance (EPA 530-SW-87-002B)
9483.00-03	10/02/87	Questions & Answers Regarding the July 14, 1986 Hazardous Waste Tank System Regulatory Amendments
9483.00-04	05/19/87	Implementation Strategy for the Hazardous Waste Tank System Regulations
9483.01(83)	04/15/83	Definition of Tank and Surface Impoundment
9483.01(84)	02/23/84	Permitting of Hazardous Waste Treatment/Storage Tanks
9483.02(83)	04/20/83	Tank Shell Thickness Requirement
9483.03(83)	09/26/83	Tank Inspection Procedures
9483.05(83)	12/08/83	Waiver of Minimum Shell Thickness Requirement
9483.50-1A	01/07/86	Guidance Manual for Hazardous Waste Tank Standards (Subpart J)
9484.00-1B	04/28/86	Interim Status Surface Impoundments Retrofitting Variances (Interim Final Guidance Document)
9484.00-03	09/15/86	Implementation Strategy for Surface Impoundment Retrofitting Exemptions
9484.00-05a	10/15/87	Surface Impoundment Retrofitting & Time Allowed for Closure
9484.01(85)	07/25/85	Interpretation of Section 3005(j)(1)
9484.00-1A-a(86)	01/02/86	Request for Comments on Guidance Concerning RCRA Section 3005(j) - Retrofitting Interim Status Surface Impoundments
9484.01(85)	07/25/85	Interpretation of Section 3005(j)(1)
9484.50-1A	01/02/86	Guidance on Variances for Retrofitting Interim Status Surface Impoundments
9486.00-02	09/17/86	Permit Guidance Manual on Hazardous Waste Land Treatment Demonstrations
9486.01(81)	06/18/81	Hazardous Waste Regulation of Gray Iron Foundry Waste
9486.01(85)	03/27/85	Criterion for the Application of Hazardous Waste Treatment Technologies
9487.00-01A	04/21/86	Use of Liquids for Wind Dispersal Control at Hazardous Waste Landfills
9487.00-02A	05/01/86	Prohibition on the Disposal of Bulk Liquid Hazardous Waste in Landfills - Statutory Interpretive Guidance
9487.00-03	09/01/82	Hydrologic Simulation on Solid Waste Disposal Sites

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9487.00-4D	01/01/84	The Hydrologic Evaluation of Landfill Performance (HELP) Model, Volumes I & II
9487.00-6C	10/01/85	Construction Quality Assurance for Hazardous Waste Land Disposal Facilities
9487.00-08	06/03/87	Joint NRC-EPA Guidance on a Conceptual Design Approach for Commercial Mixed Low-Level Radioactive & Hazardous Waste Disposal Facilities
9487.00-09	02/10/88	Vertical Expansion at the U.S. Ecology's Trench 10, Beatty, Nevada Facility
9487.01(81)	03/12/81	Interim Status of Proposed Landfill Cells
9487.01(83)	12/05/83	Landfills & Land Disposal Standards
9487.01(84)	02/07/84	Liner Design
9487.01(85)	01/22/85	Clarification on the Disposal of Nonhazardous Liquid Wastewaters & Sludges in Sanitary Landfills Under RCRA & HSWA
9487.01-01	04/30/86	Restrictions on the Placement of Nonhazardous Liquids in Hazardous Waste Landfills
9487.02(84)	05/14/84	Conditions for a Variance from Part 264 Landfill Liner & Leachate Collection Requirements
9487.02(85)	05/10/85	Clarification of Continued Landfill Disposal of "Lab Packs"
9487.03(85)	05/29/85	Clarification of Ban or Disposal of Liquids in Landfills
9487.04(85)	08/07/85	Management of Liquid Hazardous Wastes in Landfills
9487.05(84)	11/12/84	Existing Regulations on the Placement of Liquids in Landfills & Expected Requirements of the RCRA Amendments
9487.05(85)	09/20/85	User of Absorbents for Containerized Liquid Hazardous Wastes
9487.50-01A	11/18/85	"Waiver from Double Liner Requirements Pursuant to §3015(b)(1) and 40 CFR §265.301(c)" for CECOS International, Inc., Williamsburg, OH, Landfill Cell No. 9
9488.00-01A	05/21/86	Dioxin Trial Burns for Purposes of Certification or a RCRA Permit
9488.00-02	06/10/86	Permitting Incinerators
9488.00-03	06/30/86	Acceptability of Thermal Relief Vents on Hazardous Waste Incinerators
9488.00-3	09/01/81	Engineering Handbook for Hazardous Waste Incineration
9488.00-04	07/01/83	Guidance Manual for Hazardous Waste Incinerator Permits
9488.00-06	08/01/86	Hazardous Waste Incineration Permitting Study
9488.00-08	06/30/86	Acceptability of Thermal Relief Vents on Hazardous Waste Incinerators
9488.01(85)	01/10/85	Dilution of a Characteristic Waste as a Treatment Process to Qualify for the §264.340 Exemption
9488.02(85)	01/14/85	Summary of EPA's Regulations Concerning Disposal of Dioxin - Contaminated Wastes by Incineration or Landfilling

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9488.03(85)	04/01/85	Acceptable Levels of Residual Contaminants in the EPA Incinerator Residues (Revision)
9488.04(85)	05/20/85	Modification of Incinerator Permits to Burn Dioxin Wastes
9488.05(85)	05/22/85	Effective Incineration of Infectious wastes
9488.06(85)	06/18/85	Certifying Incinerators & Thermal Treatment Units
9488.07(85)	06/26/85	Effect of Water-Stripped POHCs on Incinerator DRE
9488.08(85)	08/30/85	Regulatory Status of Drum Furnaces Burning Hazardous Waste Fuel
9488.50-01A	11/08/85	Burning Hazardous Waste Fuels in Cement KILNS
9489.00-02	04/22/88	Issues Relating to Miscellaneous Units
9489.01(82)	11/23/82	Status of DOD Munitions Deactivation Facilities
9490.00-02	11/14/80	Used Oil Recycling Act of 1980 (P.L. 96-463) (PIG-81-5)
9493.00-01A	07/31/86	EPA's Interpretation of the HSWA Prohibition on the Use of Hazardous Waste as a Dust Suppressant
9493.01(85)	07/12/85	Prohibition on Use of Hazardous Waste for Dust Suppression or Road Treatment
9494.00-01	08/24/87	Implementation Strategy to Accompany the Proposed Rule for Burning of Hazardous Waste Fuels
9500.00-01A	03/14/86	Guidance Document on RCRA Public Involvement
9501.01(82)	07/09/82	Guidance for Permitting of Hazardous waste Incinerators
9501.01(84)	11/09/84	RCRA Reauthorization Statutory Interpretation #1: Immediate Permit Requirements
9501.02(82)	12/29/82	RCRA Land Disposal Permit Strategy
9502.00-02	04/18/86	RCRA Corrective Action at Federal Facilities
9502.00-03	08/04/86	Implementation of UIC Corrective Action Requirements
9502.00-04	08/14/86	Implementation of RCRA Facility Assessments
9502.00-05	10/09/86	RCRA Facility Assessment Guidance
9502.00-06	07/24/87	Definition of Solid Waste Mgmt Unit for the Purpose of Corrective Action Under §3004(u)
9502.00-06C	07/01/87	RCRA Facility Investigation (RFI) Guidance
9502.00-06D	06/16/89	RCRA Facility Investigation (RFI) Guidance Vol. 1 of IV (EPA 530/SW-89-031, May 1989)
9502.00-07	03/08/88	Use of Corrective Action Authorities at Closing Facilities
9502.01(84)	12/07/84	Permitting of Refinery Oily Wastewater Treatment Ponds
9502.01(85)	02/05/85	RCRA Reauthorization Statutory Interpretation #3: Immediate Implementation of New Corrective Action Requirements

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9502.02(85)	06/17/85	Regulation of Wood Treatment Plant Drip Areas as SWMUs
9502.05(85)	02/05/85	RSI: Guidance on Corrective Action for Continuing Releases
9502.05(85B)	02/05/85	RCRA Reauthorization Statutory Interpretation #3: Immediate Implementation of New Corrective Action Requirements
9503.01(85)	05/10/85	Definition of Mixed Waste (DOE Facilities)
9503.02(85)	08/30/85	Regulation of "Mixed Wastes" at DOE Facilities
9503.50-01A	12/23/85	RSI Memorandum for RD&D Permits
9503.51-01A	12/24/85	RD&D Permit for a Sludge Drying Process in a Wastewater System
9503.52-01A	01/02/86	Permit-Exempt Status of Sludge Dryers Added to Wastewater Treatment Units
9504.01(84)	08/16/84	Enforcing Groundwater Monitoring Requirements in RCRA Part B Permit Applications
9504.02(84)	11/29/84	Responses and Mechanisms to Prevent GWM Deficiencies
9505.00-01	08/19/93	RCRA Public Involvement Manual
9521.00-01	10/03/90	RCRA Permit Appeals Guidance Manual
9521.01(84)	05/02/84	Inadequate Part B Permit Application
9521.02(84)	02/22/84	Public Participation in Permit Issuance
9521.03(84)	07/09/84	Reporting Withdrawals in SPMs as Final Permit Determinations
9522.00-01	09/15/86	Effect of Land Disposal Restrictions on Permits
9522.00-02	11/16/87	RCRA Permit Requirements for State Superfund Actions
9522.00-02a	03/09/88	RCRA Permit Requirements for State Superfund Actions
9522.00-03	11/13/87	Region 10's Recommended Revision of 40 CFR §§ 270.4(a) & 270.32(b)(1)
9522.01(82)	05/14/82	Definition of "Major" Hazardous Waste Generators, Transporters, & Facilities (PIG-82-2)
9522.01(85)	02/11/85	Signatories to Department of Defense Permit Applications
9522.02(83)	07/11/83	Revised Definition of "Major Handlers" of Hazardous Waste
9522.02(85)	04/09/85	Steam Team RCRA Permit Issuance to Facilities in Violation of Other Federal Laws and Regulatory Programs
9522.03(84)	07/30/84	Issuance of RCRA Permits to Facility Owners and Operators
9522.03(85)	07/05/85	Requirements of §213 of HSWA
9522.04(84)	10/01/84	EPA Review of Draft State RCRA Permits
9522.04(85)	08/30/85	Partial Permitting
9523.00-01A	07/05/86	Permit Applicants' Guidance Manual for Exposure Information Requirements Under RCRA §3019
9523.00-02A	09/26/86	Procedural Guidance for Reviewing Exposure Information Under RCRA §3019

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9523.00-05	07/01/86	Permit Applicant's Guidance Manual for Hazardous Waste Land Treatment, Storage and Disposal Facilities
9523.00-10	10/01/83	Permit Applicant's Guidance Manual for the General Facility Standards of 40 CFR 264
9523.00-11	12/10/86	Denial of RCRA Operating Permits
9523.00-12	03/30/87	Summary of Permit Assistance Team (PAT) Comments
9523.00-14	03/14/86	Summary of Recent Permit Assistance Team (PAT) Comments
9523.00-15	03/30/88	Summary of Permit Assistance Team (PAT) Comments
9523.00-16	04/19/88	Call-in of Storage and Treatment Applications
9523.00-17	09/02/88	Summary of Assistance Branch Permitting Comments
9523.00-18	03/14/89	Summary of Assistance Branch Permitting Comments
9523-01(82)	10/22/82	Existing Incinerators and Data in Lieu of Trial Burn
9523.01(84)	01/17/84	Estimated Closure Dates in Permit Applications
9523.01(85)	02/25/85	Required Signatures on Part B Permit Applications
9523.02(84)	05/24/84	Guidance on Petroleum Refinery Waste Analyses for Land Treatment Permit Applications (list of 89 Hazardous Constituents Possibly Present in Refinery Wastes & Column Clean Up Procedure)
9523.03(83)	06/17/83	Land Owner Signature on Part A Applications
9523.03(85)	08/19/85	Additional Organic Parameters in Evaluation of Interim Status Groundwater Monitoring
9523.05(83)	07/29/83	Supplemental PAT Comments on McDonnell-Douglas Electronics Part B Applications
9523.05(84)	09/06/84	Groundwater Monitoring Requirements at a Site Overlying by Two Aquifers
9523.09(84)	11/23/84	Criteria for Using Trial Burn Information Obtained from One Incinerator to Issue a Permit at a Second Incinerator in Lieu of Conducting a Second Trial Burn at the Second Facility
9523.10(84)	11/29/84	EPA Authority Under RCRA §3008 to Assess Penalties for Failure to Submit a Complete and Adequate Part B Application
9523.50-01A	11/18/86	Post-Closure Part B Permit Requirements
9524.01(82)	02/08/82	RCRA Permits for Facilities that have Underground Tanks
9524.01(84)	10/05/84	Use of Compliance Schedules in RCRA Permits
9524.01(85)	08/01/85	Future Permitting of Incinerators Burning Non-Hazardous Waste
9524.02(84)	10/11/84	Permit Writer Responsibilities in Writing Permit conditions, the Velsicol Decision
9525.01(82)	01/29/82	Proposed Mechanism for Handling Mobile Treatment Units
9527.00-01A	05/01/86	Guidance Manual for Research, Development and Demonstration Permits Under 40 CFR §270.65

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NOTE: (*) = ELIMINATED

DIRECTIVE #	DATE	TITLE
9527.01(82)	11/02/82	RCRA Permits for Mobile Treatment Units & Multiple Sites Using the Same Type of Equipment
9527.01-84	03/19/84	The Revised Delegation to Process "Research and Special Incineration-at-Sea Permits"
9527.02(82)	11/02/82	EPA's Mobile Incinerator
9527.02(84)	07/20/84	Permitting Mobile Treatment Units. PAT Comments: EPA's Mobile Incinerator. Denney Farm Site. MO
9528.00-01	05/25/88	Interim Status Expansion to Add an Incinerator
9528.01(82)	05/28/82	Changes to Hazardous Waste Mgmt Facilities During Interim Status: Current & Proposed Regulations
9528.02(82)	07/20/82	Facility Changes During Interim Status
9528.50-1A	11/05/85	Interpretation of 40 CFR 270.70(b)
9540.00-1C	03/31/86	Draft State Consolidated RCRA Authorization Manual
9540.00-03	06/25/85	Guidance on RCRA State Program Reversion
9540.00-04	06/06/85	Review of State Statutory Authorities for the HSWA Amendments
9540.00-05	08/09/82	Status of Permits Issued Before a State Receives RCRA Phase II Authorization (PIG-82-5)
9540.00-6	07/01/85	RCRA Reauthorization and Joint Permitting in Authorized States: RCRA Reauthorization Statutory Interpretation #5
9540.00-07	01/15/87	Compliance Schedules for State Program Revisions
9540.00-08	04/08/87	Capability Assessments for RCRA Authorization Program Revisions
9540.00-09	01/21/88	State Consolidated RCRA Authorization Manual (SCRAM)
9540.00-09A	11/09/90	State Authorization Manual (SAM) Vols. I & II
9540.00-10	01/30/92	Capability Assessment Guidance
9540.50-1A	11/06/85	Effect on State Authorization of HSWA §3006(f): Availability of Information
9541.00-01A	06/16/86	State Program Revisions for RCRA
9541.00-03	06/10/83	RCRA State Final Authorization Guidance Manual
9541.00-03A	09/01/82	Equivalency of State Financial Responsibility Mechanisms
9541.00-04	02/21/84	Review of State Capability in RCRA Final Authorization
9541.00-6	07/30/87	State Program Advisory #2: RCRA Authorization to Regulate Mixed Waste
9541.00-7	06/09/88	State Program Advisory (SPA) #3: RCRA Authorization. Non-HSWA Cluster III & HSWA Cluster I
9541.00-09	08/22/88	State Program Advisory #5: Revised Model Attorney General's Statement and Models G & H <u>Federal Register</u> Notices for Codification
9541.00-10	09/27/88	State Program Advisory #4: State Program Changes for Non-HSWA Cluster IV and HSWA II and

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
		Associated Revisions to the SCRAM
9541.00-11	07/13/89	State Program Advisory #6
9541.00-12	09/10/90	State Program Advisory #7 (Memo to Regional Division Directors (1-10))
9541.00-13	03/01/91	State Program Advisory #8
9541.00-14	01/08/92	State Program Advisory #9
9541.00-16	07/28/92	State Program Advisory #10
9541.00-17	09/23/93	State Program Advisory #11
9541.00-18	04/04/94	State Program Advisory #12
9541.00-19	04/07/94	State Program Advisory #13
9541.00-20	07/12/94	State Program Advisory #14
9541.01(81)	09/29/81	States' Role in Assigning EPA Identification Numbers (PIG-81-12)
9541.01(82)	05/17/82	EPA Enforcement of RCRA-Authorized State Hazardous Waste Laws & Regulations (PIG-82-3)
9541.01(83)	09/08/83	State Regulation Development & RCRA Final Re-authorization
9541.01(84)	02/21/84	State Regulation of Radioactive Waste
9541.01(85)	03/06/85	RCRA Permit Re-authorization Issues in Region 3
9541.02(83)	12/14/83	State Financial Regulations
9541.02(84)	03/05/84	Jurisdiction & Implementation of the Hazardous Waste Program on Indian Lands
9541.02(85)	11/20/81	Universe of Wastes for EPA Permit Activities in State Authorized for Phased II or Final Authorization (Ref. PIG-82-1)
9541.03(84)	04/16/84	Effect on Authorized State of Recent Addition of a Waste Stream to 40 CFR 261.31
9541.03(85)	03/08/85	Review of State Statutory Authorities for the Hazardous & Solid Waste Amendments of 1984
9541.04(84)	05/21/84	Determining Whether State Hazardous Waste Requirements are Broader in Scope or More Stringent than the Federal RCRA Program PIG-84-1
9541.05(85)	03/20/85	Application of 40 CFR 271.21(e) ("Moving Target") to Recently Promulgated Regulations
9541.05(84)	06/13/84	Transfer of Federal RCRA Permits to Authorized States & Compliance with 40 CFR 124.10(e)
9541.05(85)	05/08/85	Management of Wastes Newly Regulated Under HSWA
9541.06(84)	06/27/84	Effect of Applicability Revision on Final Authorization Requirement
9541.06(85)	05/20/85	Role of Local Governments in Operating Hazardous Waste Programs
9541.07(84)	06/29/84	State Adoption of Regulations in Anticipation of Pending Federal Regulations Which Would Reduce the Stringency or Scope of the Federal Program

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NOTE: (*) - ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9541.08(84)	09/13/84	Radioactive Waste Exemption in North & South Carolina
9541.08(85)	08/16/85	Revisions to State Program
9541.09(85)	07/01/85	Re-authorization Statutory Interpretation - #5 RCRA Re-authorization & Joint Permitting in Authorized States
9542.00-03	10/23/80	Federal Register Notice of Public Hearing & Comment Period on State Applications for Interim Authorization (PIG-81-2)
9542.00-04	12/01/80	Final Determinations on State Applications for Interim Authorization Action Memo & Federal Register Notice (PIG-81-7)
9542.01(80)	10/03/80	Requirement that State-Permitted Hazardous Waste Facilities have "Interim Status" (PIG-80-3)
9542.01(81)	02/12/81	Involvement of States Without Phase II Interim Authorization in RCRA Permitting (PIG-81-11)
9542.01(82)	05/25/82	State & EPA Interaction Regarding Exclusion of Waste Generated at Individual Facilities ("Delisting") (PIG-82-4)
9542.01(83)	08/02/83	Changes During Interim Status in Phase II Authorized States
9542.01(85)	01/11/85	RCRA RSTI #2: Extensions of Interim Authorization of State Hazardous Waste Programs
9542.02(80)	10/03/80	Interim Authorization of Program Based on Emergency State Regulations (PIG-80-2)
9542.02(81)	03/24/81	Transfer of Notification & Permit Application Information to States (PIG-81-10)
9542.02(82)	07/09/82	Federal Delisting & RCRA Permitting in Interim Authorized States
9542.02(84)	12/17/84	Clarification of State Vs. Federal Role in Interim Authorization
9542.03(80)	10/17/80	The Use of State Permitting Systems During Phase I Interim Authorization Not Based on Explicit Regulatory Standards (PIG-81-1)
9542.03(81)	11/20/81	Universe of Wastes for EPA Permit Activities in States Authorized for Phase I Only (PIG-82-1)
9542.04(80)	10/31/80	"Delisting" of Wastes by Authorized States (PIG-81-4)
9542.05(80)	11/14/80	State Regulation of Federal Agencies for Purpose of Interim Authorization (PIG-81-6)
9543.00-02	12/27/84	Additional Guidance on RCRA State Capability Assessments
9543.01(84)	06/26/84	State Capability Assessment Guidance
9545.00-2	07/01/86	RCRA Permit Quality Protocol
9545.00-4	05/15/86	FEDTRAK Federal RCRA Regulation Tracking System
9545.00-06A	08/11/88	RCRA Program Evaluation Guide

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<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9551.00-01	05/23/94	RCRA Policy Statement: Clarification of the Land Disposal Restrictions." Dilution Prohibition & Combustion of Inorganic Metal-Bearing Hazardous Wastes
9551.00-01A	02/26/86	Land Disposal Ban Variance Petitioner's Guidance Manual
9555.00-01	09/28/90	Memo to All NRC Licensees: Guidance on the Land Disposal Restrictions' Effects on Storage & Disposal of Commercial Mixed Waste
9560.01(85)	01/08/85	The Use & Nature RSIs
9560.02(83)	11/15/83	RCRA Permits for Superfund Sites
9560.02(85)	04/29/85	Delegation of Authority to Issue Permits
9560.03(85)	05/08/85	Joint Permitting & Compliance Schedules for Corrective Action
9560.05(85)	05/24/85	Loss of Interim Status Provisions
9560.10(85)	06/03/85	Detection of Gasoline Contamination in GW & Detection of LUST
9560.12(85)	07/10/85	Clarification of Points Raised at an EPA Symposium on RCRA & HSWA
9560.14(85)	08/05/85	Clarification of Types of Activities that May Be Used to Satisfy the Waste Minimization Certification
9560.15(85)	09/11/85	Waste Minimization: Permit Certification & Joint Permitting
9571.00-01A	07/29/88	Cooperative Agreement Guidance for State Mining Waste Programs
9572.00-01	10/16/87	Implementation of HSWA Subtitle D §4005(c)(1)(A) & §4005(c)(1)(C)
9572.00-02	02/22/88	Letter to State Environmental Commissioners: Subtitle D State Solid Waste Management Plans
9573.00-01	09/18/92	Exemption for Municipal Waste Combustion Ash from Hazardous Waste Regulation Under RCRA §3001(i)
9574.00-01	11/01/88	Clarification of Issues Pertaining to Household Hazardous Waste Collection Programs
9574.00-02	07/22/92	RCRA Subtitle C Requirements Applicable to Household Hazardous Waste Collection Programs Collecting Conditionally Exempt Small Quantity Generator Waste
9581.01-1A(86)	01/09/86	Guidance on Use of FY86 Additional RCRA Grant Funds
9595.00-1	05/06/86	Facility Management Planning/Multi-year Strategies

*** UNDERGROUND STORAGE TANKS (UST) ***

9610.1	02/10/86	When is a Tank Considered to be Installed
9610.2	04/07/86	Clarification of the Definition of "Underground Storage Tank"

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NOTE: (*) = ELIMINATED

<u>DIRECTIVE #</u>	<u>DATE</u>	<u>TITLE</u>
9610.3	05/02/86	Revisions & Additions to the Underground Storage Tank (UST) Notification Definitions
9610.05	04/13/88	FY'89-FY'90 Transition Strategy for the Underground Storage Tank Program
9610.05-01	01/30/89	Transition Tasks List
9610.06	05/06/88	The UST Program Appraisal Strategy
9610.07	03/14/88	UST Program Indian Lands Strategy for FY'88 & FY'89 and Guidance for Regional Pilot Project
9610.08		

ADMINISTRATIVE RECORD INDEX
 ARCANUM IRON & METAL SITE
 ARCANUM, OHIO

FILE/FOLDER	PAGES	DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE
1	6	83/05/20	Information on site location, newspaper articles and copies of letters to local residents and health officials.	Thomas Ontko-USEPA	Erin Moran-USEPA	Correspondence
2	1	83/06/22	Memo. re: Arcanum Village water supply.	Thomas Ontko-USEPA	Erin Moran-USEPA	Correspondence
3	5	84/03/26	Letter re: well logs and analytical results of samples.	Thomas Ontko-USEPA	Gerald Foess-CHEM Hill	Correspondence
4	8	84/09/26	Notice and description of Monitoring Well Installations	Erin Moran-USEPA	Dr. Schlosser-Darke Co.	Correspondence
5	2	85/06/20	PRP Notice Letter	Constantelos-USEPA	Harold Shane	Correspondence
6	12	85/08/26	Additional Engineering Studies for the AIM Site.	Ike Johnson-CHEM Hill	Allen Wojtas-USEPA	Correspondence
7	15	85/09/11	Results of well sampling of residents.	Allen Wojtas-USEPA		Correspondence
8	6	85/12/13	Site review to EPA Public Health Advisor.	US Dept Health/human Services	Louise Fabinski-USEPA	Correspondence
9	7	86/04/02	Information to residents on analysis of water samples from well.	Allen Wojtas-USEPA		Correspondence
10	3	86/10/31	Response to residents information re: where wells are located.	Margaret McCue-USEPA	Howard Fastick	Correspondence
11	11	85/08/00	Superfund Program Fact Sheet.	USEPA		Fact Sheet
12	1	86/10/17	Memo to public re: update on status of site.	Wojtas-USEPA RPM	To all interested	Fact Sheet
13	11	00/00/00	Delegation Analysis Summary	USEPA		Memorandum
14	1	84/07/12	Notice of Agenda of 7/18/84 public meeting.	McCue-USEPA	Hannans, Musgrave, No ran...	Memorandum
15	2	84/08/14	Trip report:kick-off RI/FS meeting,	Margaret McCue-USEPA	File	Memorandum

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FICHE/FRAME	PAGES	DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE
			7/18/84.			
16	1	84/11/27	Trip report-inspection of field RI/FS activities at Arcanum 10/26/84.	Erin Moran-USEPA	File	Memorandum
17	1	85/08/07	List of Arcanum RI distribution.	Margaret McCue-USEPA	Allen Mojtas-USEPA	Memorandum
18	2	86/07/31	Trip Report for FS meeting 7/28/86.	Margaret McCue-USEPA	File	Memorandum
19	3	86/08/21	Results of public comment period.	Margaret McCue-USEPA	File	Memorandum
20	6	86/09/00	Responsiveness Summary-Appendix A and list of Community Relations activities conducted.	USEPA		Memorandum
21	35	86/09/02	Record of Decision	Valdas Adamkus-USEPA		Memorandum
22	1	00/00/00	Announcement of Public Meeting to be held on 7/18/84 to discuss the investigation of environmental hazards at the Arcanum Iron and Metal Site.	McCue-USEPA		News Release
23	1	84/07/03	News Release "USEPA To Brief Residents on Arcanum, Ohio, Superfund Site.	Moran & McCue-USEPA		News Release
24	2	86/07/18	EPA News Release "USEPA To Hold Public Meeting On Arcanum Iron & Metal Cleanup".	Margaret McCue-USEPA		News Release
25	1	00/00/00	List of sampled residential wells.			Other
26	1	84/07/18	Public meeting agenda for 7/18/84.	USEPA		Other
27	76	84/08/13	Subcontract documents for the installation of Monitoring	Woodward-Clyde Consultants	USEPA	Other

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 ARCANUM IRON & METAL SITE
 ARCANUM, OHIO

FICHE/FRAME	PAGES	DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE
			Wells.			
28	7	84/09/00	Report: "Review of In-Place Treatment Techniques for Contaminated Surface Soils." Volume 1: Technical Evaluation (Guidance).	USEPA		Other
29	3	86/07/28	Public meeting agenda 7/28/86 and site information.	USEPA		Other
30	5	00/00/00	Administrative Order by Consent in the matter of Harold Shane d/b/a Arcanum Iron And Metal Co.	USEPA	Harold Shane	Pleadings/Orders
31	5	83/09/16	Consent Decree in State of Ohio, et al v. Harold Shane d/b/a Arcanum Iron And Metal Co. # 44459, Ct. of Common Pleas, Darke Co., Ohio.	R. Sahli-Atty. Gen. Office	Harold Shane	Pleadings/Orders
32	11	86/02/21	Signed Administrative Order on Valdes Adams-USEPA Consent - in the matter of Arcanum 2, # V-W-86-C-004.		Harold Shane	Pleadings/Orders
33	3	83/03/00	Report: "A Guide for Revegetation of Mined Land in eastern US using Municipal Sludge."	Sopper and Seaker-Penn State U		Reports/Studies
34	158	83/07/15	Remedial Action Master Plan (RAMP).	CH2M Hill	USEPA	Reports/Studies
35	67	84/04/13	Final Work Plan	CH2M Hill	USEPA	Reports/Studies
36	18	84/06/07	Final Community Relations Plan.	CH2M Hill	USEPA	Reports/Studies
37	19	84/08/14	Geophysical Survey Plan	Woodward-Clyde Consultants	CH2M Hill & USEPA	Reports/Studies
38	7	84/08/15	Site Safety Plan for Field Investigations.	CH2M Hill	USEPA	Reports/Studies
39	4	84/10/30	Technical Memo-Additional Data Gathering Task.	Woodward-Clyde Consultants	CH2M Hill	Reports/Studies
40	102	85/01/31	Quality Assurance Project	CH2M Hill	USEPA	Reports/Studies

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ARCANUM IRON & METAL SITE
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FILE/FRAME	PAGES	DATE	TITLE	AUTHOR	RECIPIENT	DOCUMENT TYPE
			Plan (GAPP).			
41	474	85/08/09	Final Remedial Investigation Report.	CHEM Hill	USEPA	Reports/Studies
42	26	86/03/17	Draft Soil Treatment Appendix for Lead Contaminated Soils.	CHEM Hill		Reports/Studies
43	25	86/05/00	Emergency Action Plan-Arcanum II	Weston-Sper	USEPA	Reports/Studies
44	212	86/07/15	Public Comment-feasibility Study (FS).	CHEM Hill	USEPA	Reports/Studies
45	24	86/12/31	Soil Samples Results:Arcanum II	Adams & Springer;Weston-Sper	TAT Michael Strimbe-USEDA	Reports/Studies
46	43	87/03/23	Predesign Report For The Selected Remedy - Remedial Investigation/ Feasibility Study.	CHEM Hill	USEPA	Reports/Studies
47	3	84/10/29	Precision and accuracy of analyses for data set SF-777.	Kuehl or Kucharz-USEPA		Sampling/Data
48	7 3	84/11/15	Data sample analysis-water samples.	Kuehl-USEPA		Sampling/Data
49	2	85/02/08	Review of Region V Data recieved for review on 12/24/84 of data set SF-793.	USEPA-CAL	J.Kaiser-CHEM Hill	Sampling/Data