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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

FEB 0 5 1995

Mr. Ron Kozel
Iowa Department of Natural Resources
Des Moines, Iowa

Dear Mr. Kozel:

As you may be aware, the Superfund removal program of the Environmental Protection Agency (EPA) is contemplating a removal action at the Pacific Activities Limited Site in Davenport, Iowa. To perform this action, EPA will attempt to comply, to the extent practicable, with all applicable or relevant and appropriate state requirements (ARARs). This letter formally requests that the State of Iowa identify any potential ARARs for this site. A draft Action Memorandum and Statement of Work for the site is enclosed.

We request that an appropriate state official identify potential ARARs in the tables provided. To qualify as state ARARs, these requirements must be promulgated. A state requirement is promulgated if it is legally enforceable and of general applicability.

The tables are divided into three sections addressing the following categories: chemical-specific requirements, location-specific requirements, and action-specific requirements. Chemical-specific requirements are health- or risk-based numeric values that establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the ambient environment. Location-specific requirements are restrictions placed on the concentration of hazardous substances or the conduct of activities solely because they occur in special locations. For example, a location-specific requirement demands that hazardous waste storage facilities, if located within 100-year flood plains, must be designed, constructed, operated, and maintained in a manner which avoids washout. Action-specific requirements are technology- or activity-based requirements or limitations on actions taken with respect to hazardous waste.

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Your timely response will ensure that Iowa requirements will be considered when conducting the removal action. If it is not possible to detail these regulations in writing within the next 15 days, please telephone the Enforcement Project Manager (EPM), Jeff Weatherford, at (913) 551-7695, or his supervisor, Paul Doherty, at (913) 551-7924 with this information before confirming the information in writing. All information concerning state ARARs must be received in writing within thirty days of receipt of this letter. Also, please feel free to contact Mr. Weatherford or Mr. Doherty if additional information on the site is needed for the purpose of completing the enclosures, or if you wish to comment on the proposed action.

Any state policies or guidance will be considered, even if they are not ARARs. The EPM will examine your responses to determine whether they are applicable, or relevant and appropriate to the site to the extent practicable. It is important to clarify, however, that all potential state ARARs identified in the tables may not be met during the removal.

Sincerely,

for Ronald E. Hill

Robert L. Morby
Chief, Superfund Branch
Superfund Division

Enclosure(s)

TABLE 1: CHEMICAL-SPECIFIC REQUIREMENTS

Chemical	Maximum Concentration Allowed	Medium	Reason Why Requirement is an ARAR	Regulatory Citation

TABLE 2: LOCATION-SPECIFIC REQUIREMENTS

Location Subject to Requirement	Requirement	Reason Why Requirement is an ARAR	Regulatory Citation

TABLE 3: ACTION-SPECIFIC REQUIREMENTS

Action Subject to Requirement	Requirement	Reason Why Requirement is an ARAR	Regulatory Citation

Draft 1: Do Not Cite or Quote

DRAFT

MEMORANDUM

DATE: [redacted]

SUBJECT: Request for a Removal Action at the Pacific Activities Limited Site, Davenport, Scott County, Iowa.
ENFORCEMENT ACTION MEMORANDUM

FROM: Jeffrey G. Weatherford, P.E.
Enforcement Project Manager
Superfund Branch

TO: Dennis Grams, P.E.
Regional Administrator

THRU: Michael Sanderson
Acting Director
Waste Management Division

SITE ID: __

I. PURPOSE

The Purpose of this Action Memo is to request and document approval of the proposed removal action described herein for the Pacific Activities Limited (PAL) site in Davenport, Scott County, Iowa. Although this document is an Enforcement Action Memorandum, should the PRPs fail to promptly or properly conduct this removal action, we will request approval to conduct this action as a fund lead in an addendum to this memorandum.

II. SITE CONDITIONS AND BACKGROUND

1. Removal Site Evaluation

The PAL site was referred to the Superfund Branch from the RCRA Branch. The majority of the contamination at this site is believed to be attributed to operations conducted by Alloy Metal Products Incorporated. Alloy Metal Products Inc. produced secondary nickel alloy "pigs" at its plant at 626 Schmidt Road until filing for chapter 7 bankruptcy in July 1987. Alloy metal products Inc. purchased various grades of nickel alloy scraps in the form of grindings, turnings, solids, borings, catalysts, flue dusts, and sludges. These scraps were subsequently melted in electric arc furnaces, poured into 35-50 pound "pigs", and then sold as nickel additive.

When these scraps were melted, flue dust was collected in an emission control dust collection system connected to the furnace. This flue dust contained approximately the following percentages

of heavy metals:

METAL	CONCENTRATION (PERCENT)
Nickel	7-12
Chromium	2-5
Molybdenum	0.75-3
Copper	0.5-2
Cobalt	0.5-2
Carbon	1-3
Iron	5-10
Silicon	0.5-1.25
Manganese	0.5-1.25
Cadmium	0.5-1.5
Lead	0.5-1.5

These flue dusts (hereinafter referred to as baghouse waste) exhibited the characteristic of toxicity by exceeding the Extraction Procedure Toxicity limits for lead and cadmium. Alloy Metal Products Inc. would collect the baghouse waste and store it on-site until it could be recycled back into the Alloy Metals' nickel "pig" process. An EPA compliance inspection in 1988 indicated that Alloy metals had accumulated as much as 1 million pounds of this waste during the period from 1964 to 1988. Pacific Activities Limited took over operations at the facility on or about May of 1989.

A RCRA facility assessment report was prepared for EPA on July 19, 1991. This report identified 27 solid waste management units (SWMUs) that would require closure under RCRA. These SWMUs included several baghouse dust piles, a PCB capacitor storage area, a laboratory, several containers of unknown liquids and solids, drums of sodium cyanide and hydroflouric acid, several drums of flammable solids, several piles of slag, and a solid waste disposal area.

During the week of October 18-21, 1993, a detailed sampling investigation was conducted by EPA contractors to better define the extent of contamination at the site. The results of this investigation showed widespread contamination at the site. Cadmium and lead were detected at levels as high as 2,400 and 160,000 milligrams per kilogram (mg/kg), respectively, in waste piles at the site and as high as 2,400 and 49,000 mg/kg, respectively, in on-site soils.

2. Physical Location

The PAL Site is located at 626 Schmidt Road, Davenport, Scott County, Iowa. The area immediately surrounding the facility is zoned heavy industrial/commercial and is comprised of the following types of facilities: scrap metal reclamation, drum reclamation, chemical formulation and distribution, rail and

truck transportation, and commercial food manufacturing. The Mississippi River is located approximately 1,900 feet southeast of the facility.

The nearest residence is less than 500 feet from the site. The commercial/industrial area is surrounded on three sides by residential areas. There is a school and church located within 1500 feet east of the site and a school located approximately 3500 feet north of the site.

3. Site Characteristics

The PAL site is a former metals recycling facility. As a result of operations and poor waste management practices at the site, extensive heavy metal contamination has occurred. The facility is currently fenced to help restrict access. The fence is in fair to good shape overall. However, there are a few places where there are breaks in the fence which would allow access to the facility without having to climb the fence. Several removal actions have been conducted at the site by the PRPs under RCRA authority to remove drums and baghouse waste. This proposed action will be the first removal under CERCLA authority.

4. Release or Threatened Release Into the Environment of a Hazardous Substance, or Pollutant or Contaminant

CERCLA Section 101 (22) defines the term "release" as any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant).

During the October 1993 investigation, twenty-four waste piles totalling approximately 231.5 cubic yards were identified. Eleven of the twenty-four waste piles tested hazardous for cadmium via TCLP analysis. Nine of the twenty-four waste piles tested hazardous for lead via TCLP analysis. Eighteen of the twenty-four waste piles contained total lead levels above 500 mg/kg [a currently recognized soil lead remediation level]. The total lead values for the eighteen waste piles which exceeded 500 mg/kg ranged from 570 mg/kg lead to 160,000 mg/kg lead with the average lead concentration per waste pile being approximately 14,090 mg/kg lead. Twenty-two of the twenty-four waste piles contained total cadmium levels above 40 mg/kg [a currently recognized soil cadmium remediation level]. The total cadmium values for the twenty-two waste piles which exceeded 40 mg/kg ranged from 46 mg/kg cadmium to 2400 mg/kg cadmium with the average cadmium concentration per waste pile being approximately 156 mg/kg cadmium. Twenty-two of the twenty-four waste piles contained nickel levels above 2000 mg/kg [a currently recognized

soil nickel remediation level]. The total nickel values for the twenty-two waste piles which exceeded 2000 mg/kg ranged from 3800 mg/kg nickel to 120,000 mg/kg nickel with the average nickel concentration being approximately 21,458 mg/kg nickel.

Floor sweepings taken from the inside of building 17 tested hazardous for cadmium and lead via TCLP analysis. Floor sweepings taken from the inside of building 17 contained up to 1500 mg/kg cadmium, 72,000 mg/kg nickel, and 140,000 mg/kg lead.

Seventy-three samples [28 from the approximate 0' - 1.5' interval and 45 from the approximate 1.5' - 10' interval] from 40 sitewide borings were taken and analyzed. Sixteen of twenty-two samples analyzed for cadmium via TCLP analysis tested hazardous for cadmium. Eleven of twenty-two samples analyzed for lead via TCLP analysis tested hazardous for lead. The samples analyzed via TCLP analysis were first screened and some of those samples that tested high for total cadmium and total lead were then subsequently analyzed via TCLP analysis for cadmium and lead to determine if the samples would test hazardous. Seventeen of the twenty-eight approximately 0'-1.5' interval samples taken contained cadmium levels above 40 mg/kg [a currently recognized soil cadmium remediation level]. The total cadmium levels for the seventeen samples which exceeded 40 mg/kg ranged from 41 mg/kg cadmium to 2400 mg/kg cadmium with the average cadmium concentration being approximately 305 mg/kg cadmium. Twenty-three of the twenty-eight approximate 0' - 1.5' interval samples taken contained lead levels above 500 mg/kg [a currently recognized soil lead remediation level]. The total lead levels for the twenty-three samples which exceeded 500 mg/kg ranged from 520 mg/kg cadmium to 49,000 mg/kg lead with the average lead concentration being approximately 4,971 mg/kg lead.

Fifteen of the twenty-eight approximate 0' - 1.5' interval samples taken contained nickel levels above 2000 mg/kg [a currently recognized soil nickel remediation level]. The total nickel levels for the fifteen samples which exceeded 2000 mg/kg ranged from 2,300 mg/kg nickel to 42,000 mg/kg nickel with the average nickel concentration being approximately 9,377 mg/kg nickel. Six of the forty-five approximate 1.5+' interval samples taken contained nickel levels above 2000 mg/kg [a currently recognized soil nickel remediation level]. The total nickel levels for the six samples which exceeded 2000 mg/kg ranged from 2,800 mg/kg nickel to 26,000 mg/kg nickel with the average nickel concentration being approximately 1,731 mg/kg nickel. Eleven of the forty-five approximate 1.5+' interval samples taken contained lead levels above 500 mg/kg [a currently recognized soil lead remediation level]. The total lead levels for the eleven samples which exceeded 500 mg/kg ranged from 530 mg/kg lead to 48,000 mg/kg lead with the average lead concentration being approximately 2,300 mg/kg lead.

Cadmium, lead, nickel, and their respective compounds are hazardous substances under CERCLA sections 101 (14) and 102(a) because they are listed in 40 C.F.R. part 302.4. In addition, the materials exhibiting the characteristic of toxicity as identified in 40 C.F.R. part 261.24 are hazardous substances because they are hazardous wastes.

5. NPL Status

This site is not on nor proposed for listing on the National Priorities List (NPL).

The site is currently undergoing a CERCLA preliminary assessment (PA) to assess the need for inclusion on the NPL. Results of the PA will be used to decide if the site will undergo a Site Investigation (SI) or receive a No Further Remedial Action Planned (NFRAP) designation.

B. Other Actions to Date

1. Previous Actions

Although details of previous actions conducted by the PRPs under RCRA authority are unknown, it was reported in the RCRA facility assessment that limited removal actions were conducted of the PCB capacitor storage area, demolition of some of the buildings, installation of a chain-link fence, removal of some of the waste piles, and removal of several drums of waste from the site.

2. Current Actions

No known on-site activities are currently on-going at this site.

C. State and Local Authorities Roles

1. State and local actions to date

There have been no known state or local actions at this site. The State of Iowa is not authorized to administer and enforce a hazardous waste management program in lieu of a Federal program.

2. Potential for continued state and local response

This is an EPA lead site. EPA will request that this site be placed on the State registry for confirmed hazardous waste sites. The EPA will also request that the State take the lead for oversight of any long-term monitoring conducted by the PRPs.

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

A. Threats to Public Health or Welfare

CERCLA section 104 (a) authorizes a removal response whenever any hazardous substance is released or there is a substantial threat of such a release into the environment. Further 40 C.F.R. § 300.415(b)(1) provides that, whenever the lead agency makes a determination based on factors listed in 40 C.F.R. § 300.415(b)(2) that there is a threat to public health or welfare, or the environment, the lead agency may take any appropriate removal action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or the threat of release. The following is a discussion of the factors listed in 40 C.F.R. § 300.415(b)(2) that apply to the PDF Site:

40 C.F.R. §300.415(b)(2)(i) - Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants

The southeast portion of the Site is currently being used as a local community recycling drop on Thursdays, Fridays, and Saturdays. Children have been found on-site and subsequently removed from the premises. Several workers of companies with facilities located adjacent to or nearby the Pacific Activities Limited Site spend a significant amount of their day working outside.

Lead is present at the Facility in significant quantities. EPA has classified lead as a Class B2 probable human carcinogen. Lead can be toxic to humans and animals via ingestion and inhalation. Exposure to lead in sufficient quantities may cause: premature births; smaller babies; decreased mental ability; decreased growth in children; decreased reaction time; weakness in fingers, wrists, and ankles; increased blood pressure; anemia; kidney damage; and reproductive system damage.

Cadmium is present at the Facility in significant quantities. EPA has classified cadmium as a Class B1 probable human carcinogen. Cadmium can be toxic to humans and animals via ingestion and inhalation. Exposure to cadmium in sufficient quantities may cause: lung damage; kidney damage; stomach irritation; diarrhea; high blood pressure; and iron poor blood.

Nickel is present at the Facility in significant quantities. EPA has classified nickel refinery dust as a Class A human carcinogen. Nickel can be toxic to humans and animals via ingestion and inhalation. Exposure to nickel may cause cancer of the lung and nasal sinus; an allergy that results in skin rashes and asthma.

The principal hazards posed by the contaminated soil and waste piles [some of which test hazardous] include:

1. exposure to current and future operators/users of the Facility via dust inhalation and dust ingestion,

2. exposure to nearby residents via dust inhalation and dust ingestion,

3. exposure to employees at nearby businesses via dust inhalation and dust ingestion, and

4. exposure to persons trespassing on the site, particularly young children via dust inhalation and ingestion.

40 C.F.R. §300.415(b)(2)(iv) - High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.

Cadmium and lead were detected at levels as high as 2,400 and 160,000 milligrams per kilogram (mg/kg), respectively, in waste piles at the site and as high as 2,400 and 49,000 mg/kg, respectively, in on-site soils at or near the surface. A major portion of the site area is devoid of vegetation. It is likely that migration of hazardous substances from the site does occur via the air on relatively windy days. It is also likely that soil is migrating from the site due to erosion during relatively heavy rains.

B. Threats to the Environment

No attempt has been made to determine the threats to the environment at this site. However, the Mississippi River is nearby the site and is the major point of discharge for Davenport's sewer systems. Contaminants migrating from the site into the sewer system could possibly end up in the Mississippi River, thus degrading water quality.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The proposed action for the PAL site is on-site solidification followed by a suitable cover material. This proposed action will significantly reduce or eliminate the migration of contaminants from the site as well as the threat of direct contact to persons entering or working on or near the site.

The solidification process, often called stabilization, fixation or immobilization, involves mixing the contaminated material with an appropriate ratio of binder/stabilizer and water. Binding and hardening material ties up the free water in the matrix. Reactions with hydroxides and carbonates form insoluble metal compounds. Potential binders include pozzolan-portland cement, lime-fly ash, thermoplastic binders (asphalt), and sorbents such as activated carbon, clays, zeolites, and anhydrous sodium silicate.

The solidification process reduces the hazardous potential of contaminated sites by converting the contaminants into their least soluble, mobile or toxic form, minimizing their potential migration off-site. This technology has been widely tested and implemented at superfund sites and is considered a reliable treatment technology for many metal contaminated soils and sludges. Generally, immobilization by the solidification technique has lower costs than any other treatment options. Some limitations of the stabilization process that will be encountered during this removal action are:

- The volume of treated material will increase with addition of reagent;
- Delivering reagents to the subsurface and achieving uniform mixing and treatment in-situ may be difficult;
- The permeability of the treated area is reduced;
- Sufficient soil cover may be required;
- Runoff controls will be required;
- Debris and other larger particles may not be amenable to treatment, and;
- Institutional controls and long-term monitoring will be required to assure the adequacy of the cover materials and to determine if contaminants are migrating via the groundwater pathway.
- The formation of fugitive dust during mixing of binder material.

These concerns have been discussed with the PRPs and will be addressed in the removal action workplan for the PAL site. Because some of the materials at the site may not be amenable to on-site treatment (i.e. slag, cinders, battery casings), it may become necessary to transport and dispose of some materials off-site. However it is expected that solidification will address the majority of the waste material.

In addition to addressing the contaminated soils at the site, this proposed action will address contamination inside buildings that may pose a threat to human health and the environment.

2. Contribution to remedial performance

The PAL site is currently undergoing a CERCLA Preliminary Assessment (PA) to determine it's remedial status. The removal actions taken at the site will not impede future actions based on available information. It is expected that this removal action will significantly reduce or eliminate migration of contaminants from the site.

3. Description of Alternative Technologies

In-situ solidification is an alternative to land disposal. The proposed action described for the PAL site will provide for protection of human health and the environment and do so in a timely manner. Because the contaminants will be treated in-situ, there will be very little excavation needed (other than normal grading to improve and control drainage), thus reducing any potential for off-site migration of contaminants during cleanup. Solidification is well proven for its effectiveness, is easily implemented, and is the most cost effective technology currently available for addressing sites with heavy metal contamination.

4. Applicable Relevant and Appropriate Requirements (ARARs)

5. Project Schedule

Removal activities are expected to begin at the site within 6 months of the signing of this action memorandum. A detailed project schedule will be part of the removal action workplan. It is not expected that on-site activities will exceed six months from the start date.

B. Estimated Costs

Since this is expected to be a PRP lead removal action, costs associated with the cleanup are confined to PRP estimated disposal costs and EPA oversight costs. Estimates for these two categories are as follows:

Estimated Removal Action Costs.....$
Estimated EPA Oversight Costs.....

Total Estimated Project Costs.....$

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed action will increase public health risks to the adjacent population through prolonged exposure to airborne contaminants.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

It is expected that the PRPs for this site will undertake the appropriate actions to address the threats posed by this site. Details of the enforcement strategy for this site are included in the attached enforcement addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Pacific Activities Limited Site in Davenport, Iowa, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for this site.

Conditions at the site meet the NCP section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed enforcement lead removal action. **This approval does not include a project ceiling.** If the PRPs fail to undertake this action, an addendum to this action memo will be drafted for your approval of a project ceiling.

Dennis Grams, P.E.
Regional Administrator

FEB 0 3 1995

Mr. Ron Kozel
Iowa Department of Natural Resources
Des Moines, Iowa

Dear Mr. Kozel:

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Robert L. Morby
Chief, Superfund Branch
Superfund Division

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