

Removal Action

During the field activities for the remedial investigation (RI), lead concentrations significantly above the lead screening levels were found in soil at several residential properties near or adjacent to the former AMCO facility. Based on the data collected during the RI, EPA performed a soil removal action to address the lead contamination at residential properties. The removal action was conducted between July 23rd and September 19th 2007 at all residences located within the same city block as the former AMCO facility. The action memorandums, which document the basis for EPA's decision, in this case the selection of a time critical removal action, are included in this Appendix.

The scope of the removal action included the properties identified as 1428, 1432 and 1436 3rd Street and 320, 326, 356, 360 and 366/368 Center Street. All yards were excavated to a depth of between 1 and 3 feet. The action level for the removal action was 390 parts per million (ppm) of lead. Figure F-1 shows the areas excavated during the removal action.

The removal was conducted under the direction of EPA Region 9. Environmental Quality Management (EQM) was the prime Emergency Response and Removal Services contractor. Clean Harbors provided waste transportation and disposal services under contract to EQM. Removal activities consisted of the excavation of lead contaminated soil in eight residential yards. In order to meet RCRA standards, the excavated contaminated soils were transported to Clean Harbors Buttonwillow LLC, in Buttonwillow, CA. A total of 35 intermodal roll off boxes were shipped for disposal. This represented a total of 523 tons of contaminated soil (approximately 387 cubic yards). EPA used a blend of biodiesel fuel for excavation equipment to reduce diesel emissions.

Following initial excavation, the remaining soil was tested for residual lead using field screening (X-Ray Fluorescence) and laboratory analyses. All locations that exceeded the action level were re-excavated and resampled until interim test results indicated that the remaining soil had lead concentrations below action levels, the excavation reached a maximum depth of three feet, or some impediment to excavation was encountered. Small areas were excavated to a depth of less than one foot, in locations where valuable trees or plants might have been damaged by deeper excavation. Property owners were consulted in these circumstances. Once excavation was complete, confirmation samples were collected and analyzed in the laboratory. After confirmation sampling was complete, EPA constructed drainage, placed clean fill, installed new grass and constructed new fences at each residence. EPA also reconstructed garden planting beds to the residents' satisfaction.

Of the nine discrete excavated areas (located on eight properties), six areas had average concentrations at the excavation floor below the action level of 390 ppm. In the remaining three areas, the excavation floor concentration averages did not meet the action

level. Work was not continued in these areas because excavation depths were at three feet or because further excavation would damage valuable plants and/or trees.

An extensive air monitoring and dust prevention plan was put in place to ensure that no hazardous lead levels were allowed to leave the site by airborne means. Daily air samples (2-3 Gillian Pumps with cassettes) were collected and analyzed around the excavation areas. Real-time daily air monitoring (using Personal Data RAMs and Area RAEs) was also completed during each day of the excavation. The action level for dust at the Site was calculated to be 8.7 ppm for an 8-hour time-weighted average (TWA). The lead-only action level was 30 micrograms/cubic meter of lead (TWA).

Dust monitoring results were below the site action levels throughout the response. Real-time data allowed crews to stop work and adjust best management practices to eliminate dust when peak readings were observed. Personnel air sampling for lead was also conducted. Complete results from these efforts will be available in a forthcoming Removal Action Final Report.

Extensive community involvement was conducted before, during and after the removal action:

- Sampling results were shared first with residents where yards were sampled, and later with the community at large.
- EPA conducted English and Spanish focus groups/public meetings to explain the Remedial Investigation (RI) lead results in soil and how EPA made the decision to conduct a time critical removal action.
- EPA conducted outreach to other residents in the South Prescott community who were concerned about lead contamination in their residences. EPA delivered fliers and participated in additional public meeting organized by community members and outside activists.
- EPA consulted immediately with County health officials, who assisted in responding to the questions and concerns of the residents.
- EPA relocated residents while contaminated soil was excavated. Some placement of clean fill and landscaping occurred after most residents returned to their homes.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MEMORANDUM

DATE: JUN 21 2007

SUBJECT: Request for a Time-Critical Removal Action at the AMCO Chemical Superfund Site, Oakland, Alameda County, California

FROM: Harry Allen, On-Scene Coordinator *Harry Allen* 6/20/07
Emergency Response Section (SFD-9-2)

THROUGH: Steve Calanog, Chief
Emergency Response Section (SFD-9-2)

TO: Daniel Meer, Chief
Response, Planning & Assessment Branch (SFD-9)

I. PURPOSE

The purpose of this Action Memorandum is to obtain approval to spend up to \$697,924 in direct costs to mitigate threats to human health and the environment posed by the presence of contaminated residential soils adjacent to the former AMCO plant property at the AMCO Chemical Superfund Site ("AMCO Site"). The AMCO Site is located within the City of Oakland, in Alameda County, California.

The Action Memorandum would serve as approval for the expenditure required for U.S. EPA, to take actions described herein to abate imminent and substantial endangerment to residents of properties contaminated by hazardous substances. The proposed removal of hazardous substances would be undertaken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(a)(1), and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415.

II. SITE CONDITIONS AND BACKGROUND

Site Status: NPL
Category of Removal: Time-Critical
CERCLIS ID: CA0001576081
SITE ID: 09QK

A. Site Description

1. Physical Location

The work will be conducted at six privately owned¹, residential parcels located near the intersection of 3rd Street and Center Street in Oakland, Alameda County, CA. The parcels are situated directly adjacent to the former AMCO Chemical plant property (see Attachment 2 for a Site Location Map).

2. Site characteristics

Areas of contamination (Areas of Concern (AOCs)) for the removal action are restricted to the back yards of residential homes located at each of the parcels respectively. These AOCs were identified during the 2006 Remedial Investigation (RI) of the AMCO Site. Each AOC can be described as a back or side yard associated with each home (see Attachment 3 for a Site Map). The AOCs are comprised of uncovered soil and are either undeveloped or used for home gardening.

The former AMCO plant property is currently leased¹ to Cable Moore, Inc. and is used for cable storage. From 1989 until 1998, DC Metals used the property, along with a nearby vacant lot and a nearby parking lot, as a scrap-metals yard. In November 1998, operations ceased at DC Metals and all scrap-metals were removed from the property.

Prior to the DC Metals operational period, AMCO Chemical Corporation owned and operated the property as a chemical distribution plant. The plant is reported to have been in operation between the 1960s and 1989. At AMCO, bulk chemicals were reportedly off-loaded into 12 above-ground storage tanks and 2 underground storage tanks and transferred to drums and other small containers for resale. In 1988, the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) conducted inspections identifying poor management practices including spills from containers. The Oakland Fire Department and the Department of Environmental Health made similar findings during that time.

In 1996 DTSC and EPA investigated possible chemical exposures at the DC Metals Site (also known as the former AMCO plant property). EPA conducted a removal assessment and a subsequent removal action. The removal action installed a dual-phase soil vapor treatment system. The system operated between 1997 and July 1998. During that time it extracted approximately 7,000 pounds of volatile organic compounds including vinyl chloride. Approximately 160 cubic yards of soil and one 1,800 gallon underground storage tank (UST) were removed.

¹ Removal actions will be subject to obtaining permission from the property owner to conduct the removal action on that property and based on field screening to determine extent of contamination.

Following the removal action, EPA collected groundwater, soil and air samples between December 1998 and April 2000, at the Site and prepared a Preliminary Assessment/Site Investigation. Additional sampling followed in August 2002. Ultimately the Site was listed on the National Priorities List (NPL) on September 29, 2003.

The AMCO Site is located in an urban mixed residential/industrial area. Apart from the former AMCO plant property, other potential sources of hazardous substances (*i.e.*, properties containing soils contaminated with lead, a hazardous substance) have been documented in the vicinity of the Site. These include: 1) 1401 3rd Street Site – currently owned by Cal-Trans, previously owned by a former agricultural chemical company, later purchased by the railroad and used by a lessee as a scrap-metal storage operation; and 2) Cal-Trans District 4 Excess Land – Former J&A Truck/Container Freight Sites – both currently owned by Cal-Trans, the J&A Site was used for truck maintenance and warehousing and contained a UST. The Container Freight Site served as a warehouse and distribution facility and also contained a UST. In addition, a former foundry was located in the vicinity of the Site.

EPA is investigating the source of the contamination found in the AOCs. Based on historical operations at the former AMCO plant property, contamination found in the AOCs may have originated from operations at the former AMCO plant property. Historical soil sampling results at the AMCO plant property and other neighboring sites indicate the presence of lead in the vicinity of the six residential properties. Lead contamination may also be the result of air dispersion, and/or migration of contaminated soils by human and vehicle traffic.

3. Removal site evaluation

EPA conducted a RI sampling event at the AMCO Site in 2006. Soil sampling at the former AMCO plant property indicated the presence of elevated levels of lead above the regional background concentration (14.7 milligrams/kilogram (mg/Kg) or parts per million (ppm)). EPA determined that additional sampling was warranted to determine the nature and extent of contamination and to document potential exposure pathways for the AMCO Site risk assessment. The RI investigation area included the six residential properties (or AOCs).

On October 18, 2006, EPA conducted soil sampling at the six residential properties. Soil samples were collected at twenty soil sampling locations at two discrete depth intervals: 0.5 to 1 foot below ground surface (bgs) and 2.5 to 3 feet bgs. A total of 40 soil samples (plus Quality Assurance/ Quality Control samples) were analyzed for lead. At least 2 sampling locations (4 sampling points) were located on each property. Sampling locations were selected in a judgmental² manner. EPA also collected

² Sampling locations were selected based on the likelihood of contamination based on best professional judgment.

produce samples from home gardens and soil samples adjacent to the plants. Produce samples did not contain elevated lead concentrations.

Other soil samples collected during the RI, were also analyzed for lead. These samples were collected on the former AMCO plant property and in the vicinity of the AMCO Site and AOCs. These results will be presented Attachment 4 for comparison purposes.

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

The sample concentrations for each property were compared to regional background concentrations and a Site-specific Preliminary Remediation Goal (PRG). Based on a visual comparison, all of the properties in the investigation exceed the regional background and the Site-specific PRG for lead (340 parts per million (ppm)). In addition, sampling results from the vicinity of the Site show that concentrations in the yards are significantly greater than other sampling areas. Attachment 5 shows the Residential Analytical Results that document the presence of lead a hazardous substance. The data for the selected parcels are included in the Administrative Record for the Site.

For risk screening purposes, EPA developed the Site-specific child PRG using DTSC's Lead Risk Assessment Spreadsheet Version 7 (Lead Spread 7, Cal/EPA 1999). This model calculates a Site-specific PRG that represents a safe concentration of lead in soil for children based on a combined exposure to lead in air, drinking water, food and soil-for a child, an adult, pica child, and occupational exposure. The reference dose used is equivalent to the 99th percentile for lead in soil samples collected during the RI. The resulting Site-specific PRG concentration is 340 ppm. This concentration excludes exposure from consumption of homegrown produce.

Background lead in soil concentrations derived from the literature for the City of Oakland, CA include a native fill concentration of 14.7 ppm and a urban soils concentration ranging from 500 to 800 ppm. Sampling results from properties 5 & 6 appear to only slightly elevated above background concentrations. For this reason EPA will further delineate potential contamination in these AOCs prior to excavation.

Fourteen surface samples collected from the residential properties exceed background lead concentrations. Twenty-seven samples overall (including surface and depth), exceed the Site-specific PRG. Although these sample locations are judgmental, these concentrations represent hot spots to which residents may be exposed.

5. NPL status

The AMCO Chemical Superfund Site is on the NPL.

Current conditions at these six residential properties adjacent to the AMCO former plant property pose an imminent and substantial endangerment (see Sections III and IV). The proposed removal action will complete all removal work required at these residential properties but is not intended to complete work at the entire AMCO Site.

B. Other Actions to Date

Previous response actions at the AMCO Site are discussed earlier in this memorandum.

C. State and Local Authorities' Roles

1. State and local actions to date

County and City officials have expressed a high level of concern about these six residential properties and have committed to assist EPA with this action. EPA and DTSC have reached consensus that EPA will take the lead on enforcement and removal activities pertaining to this Site as discussed in Section II.A.4.

2. Potential for continued State/local response

As part of the comprehensive strategy developed specifically for the neighborhood around the AMCO Site, the Alameda County Lead Poisoning Prevention Program has committed resources and staff to assist in education/outreach and blood lead testing.

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

Current conditions at the six residential properties (AOCs) pose the threat of potential future releases of a hazardous substance, namely lead. The likelihood of direct human exposure, via ingestion and/or inhalation of hazardous substances, and the threat of potential future releases and migration of those substances, pose an imminent and substantial endangerment to public health, and/or welfare, or the environment based on the factors set forth in the NCP, 40 CFR § 300.415(b)(2). These factors include:

1. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain

As described in Section II.A.4, high concentrations of lead have been detected in samples of residential soils at six properties adjacent to the former AMCO plant property. The contaminated soils are likely to result in human exposure via inhalation or ingestion. Five of the residential AOCs are not vegetated. Lead may be entrained in naturally and mechanically generated dust and/or transported on shoes and clothing of

residents passing over contaminated areas. Gardening and other yard work in the AOCs may result in increased exposure to the contamination.

Analytical results indicate that concentrations of lead identified in the residential soils exceed background and risk-based levels including the Site-specific PRG for lead. Direct human contact with dust containing lead, via inhalation or ingestion, may result in eye, skin, nose and/or lung irritation. Ingestion of lead may cause organ damage and result in weakness and other neurological impairment.

Contamination is readily accessible to on-site full-time residents. Persons living on these contaminated properties, or engaging in recreational or gardening activities on the properties are likely to come into contact with uncontrolled hazardous substances present within the soils.

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

The AOCs are typically comprised of barren soils with sparse vegetation. High winds may transport contaminated soils from the Site onto neighboring residential properties. Some of the homes have windows and doors open for the majority of the day and contaminants could be transported indoors due to high winds. Heavy rainfall could cause localized flooding (already documented at two of these residences), resulting in contaminated runoff which may impact adjacent properties, streets and storm sewers.

3. Availability of other appropriate Federal or State response mechanisms to respond to the release

The AOCs located on private land and is therefore not under the jurisdiction of any other Federal agency. The State of California has been notified of the proposed action and has supported the Federal lead approach.

IV. ENDANGERMENT DETERMINATION

Actual and threatened releases of hazardous substances from this site, if not addressed by implementing a time-critical removal action may continue to present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

EPA proposes to mitigate imminent and substantial threats to human health, welfare, or the environment by taking steps to prevent the release of and exposure to lead. The removal action will include the following objectives to prevent direct human contact with environmental lead in residential soils at the six AOCs:

- Restrict access and control dust emissions to protect people from potential exposure during the removal action.
- Remove surficial contamination in AOCs by excavating contaminated soil to achieve a lead concentration of less than 500 ppm or a depth of 1 foot below ground surface. In the vicinity of sample 26SSe, excavate contaminated soils to a depth of no more than 3 feet.
- Conduct confirmation sampling and analysis using X-Ray Fluorescence (XRF) and laboratory analyses in all AOCs. Conduct XRF screening to identify extent of contamination exceeding 500 ppm on properties 5 and 6.
- Transport and dispose excavated material at an off-site facility.
- Replace excavated material with clean fill, restore property to pre-removal conditions, to the maximum extent practicable, replacing patios, fences, trees and shrubs if necessary.
- Temporarily relocate families of affected residences pursuant to the Uniform Relocation Act if requested.

Under circumstances where special considerations are appropriate for the scope of the residential excavation, such as risk to property or significant duress for the resident, an alternative approach to the excavation extent may be deemed appropriate.

2. Contribution to remedial performance

This removal action would complete all soil clean-up activities at these 6 residential properties adjacent to the AMCO Chemical Superfund Site.

The long-term cleanup plan for the site:

It is expected that this removal action will eliminate any threat of direct or indirect contact with or inhalation of hazardous substances at these residential properties.

Threats that will require attention prior to the start of a long-term cleanup:

EPA has identified imminent threats posed by lead contamination at six residential properties. The mitigation actions described above will constitute a permanent remedy for the soils at the properties. These properties are included in the AMCO Site RI investigation area

Sources of contamination outside of the AOCs may require long-term cleanup. EPA will coordinate with DTSC to evaluate the risk of human health effects based on

other exposure pathways that may be present at the AMCO Site and select appropriate remedial actions.

The extent to which the removal will ensure that threats are adequately abated:

The removal of hazardous substances contamination by excavation and disposal will abate the threats described in Section III.

Consistency with the long-term remedy:

The time-critical removal proposed for the six residential properties is consistent with addressing the larger issue of potential exposures posed by lead contaminated soils at these properties.

3. Applicable or relevant and appropriate requirements (ARARs)

Section 300.415(j) of the NCP provides that removal actions must attain ARARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines applicable requirements as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Section 300.5 of the NCP defines relevant and appropriate requirements as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular Site.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with, administrative bodies, issuance of permits, documentation, reporting, recordkeeping, and enforcement are not ARARs for the CERCLA response actions confined to the Site.

The following ARARs have been identified for the proposed response action. All can be attained.

Federal ARARs: Potential Federal ARARs are the RCRA Land Disposal Restrictions, 40 C.F.R. § 268.40 Subpart D; the CERCLA Off-Site Disposal Restrictions,

and the U.S. Department of Transportation Hazardous Materials Regulations, 49 C.F.R. Part 171, 172 and 173.

State ARARs: Solid waste generated at the AOCs will be evaluated to determine whether or not it is hazardous waste under Chapter 11 of Title 22 of the California Code of Regulations (22 CCR). Hazardous waste generated pursuant to the removal action will comply with applicable provisions of 22 CCR Chapter 12 (Generator Standards), Chapter 13 (Transporter Standards), and Chapter 18 (Land Disposal Restrictions).

The Bay Area Air Quality Regulation 6-305 (Visible Emissions Requirements).

If the hazardous waste is transported for storage, disposal or treatment outside of CA, such management of that hazardous waste will be conducted in accordance with Federal RCRA requirements including applicable transportation, treatment, and storage requirements.

4. Project schedule

It is estimated that removal activities will take approximately 21 working days to complete.

B. Estimated Costs

Regional Removal Allowance Costs

Cleanup Contractor \$ 350,000

Extramural Costs Not Funded
from the Regional Allowance

USACE Relocation Work
Assignment 25,000
START Contractor 30,000

Extramural Subtotal \$ 405,000

Extramural Contingency (20%) \$ 81,000

TOTAL, Removal Action Project Ceiling \$ 486,000

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

Given the site conditions, the nature of the hazardous substances documented at the six residential properties, and the potential exposure pathways to nearby populations described in Sections III and IV above, actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues with the Site identified at this time.

VIII. ENFORCEMENT

Please see the attached Confidential Enforcement Addendum for a discussion regarding potentially responsible parties. In addition to the extramural costs for the proposed action, a cost recovery enforcement action also may recover the following intramural costs. The estimated intramural costs are:

Intramural Costs⁰

U.S. EPA Direct Costs	\$	25,000
U.S. EPA Indirect Costs (36.58%)	\$	<u>186,924</u>
TOTAL Intramural Costs	\$	211,924

The total EPA extramural and intramural costs for this removal action, based on full-cost accounting practices are estimated to be \$697,924.

IX. U.S. EPA RECOMMENDATION

This decision document represents the selected removal action for the six residential properties adjacent to the former AMCO plant property, Oakland, Alameda County, California developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

⁰1. Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

Because conditions at the site meet the NCP criteria for a Time-Critical Removal Action, EPA enforcement staff recommends the approval of the removal action proposed in this Action Memorandum. The total project ceiling if approved will be \$697,924, of which an estimated \$350,000 comes from the Regional Removal Allowance. Approval may be indicated by signing below.

Approve:  21 JUNE 2007

Daniel Meer, Chief Date
Response, Planning and Assessment Branch

Disapprove: _____ Date
Daniel Meer, Chief
Response, Planning and Assessment Branch

Enforcement Addendum

Attachments:

1. Index to the Administrative Record

1. Index to the Administrative Record
2. Site Location Map
3. Site Map
4. Overall Summary of Analytical Results Collected during the RI
5. Residential Analytical Results

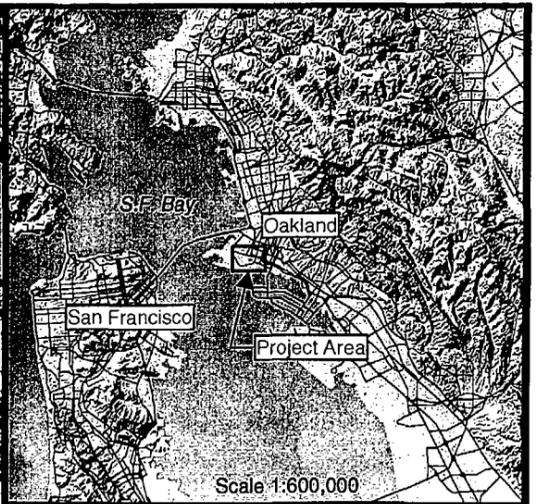
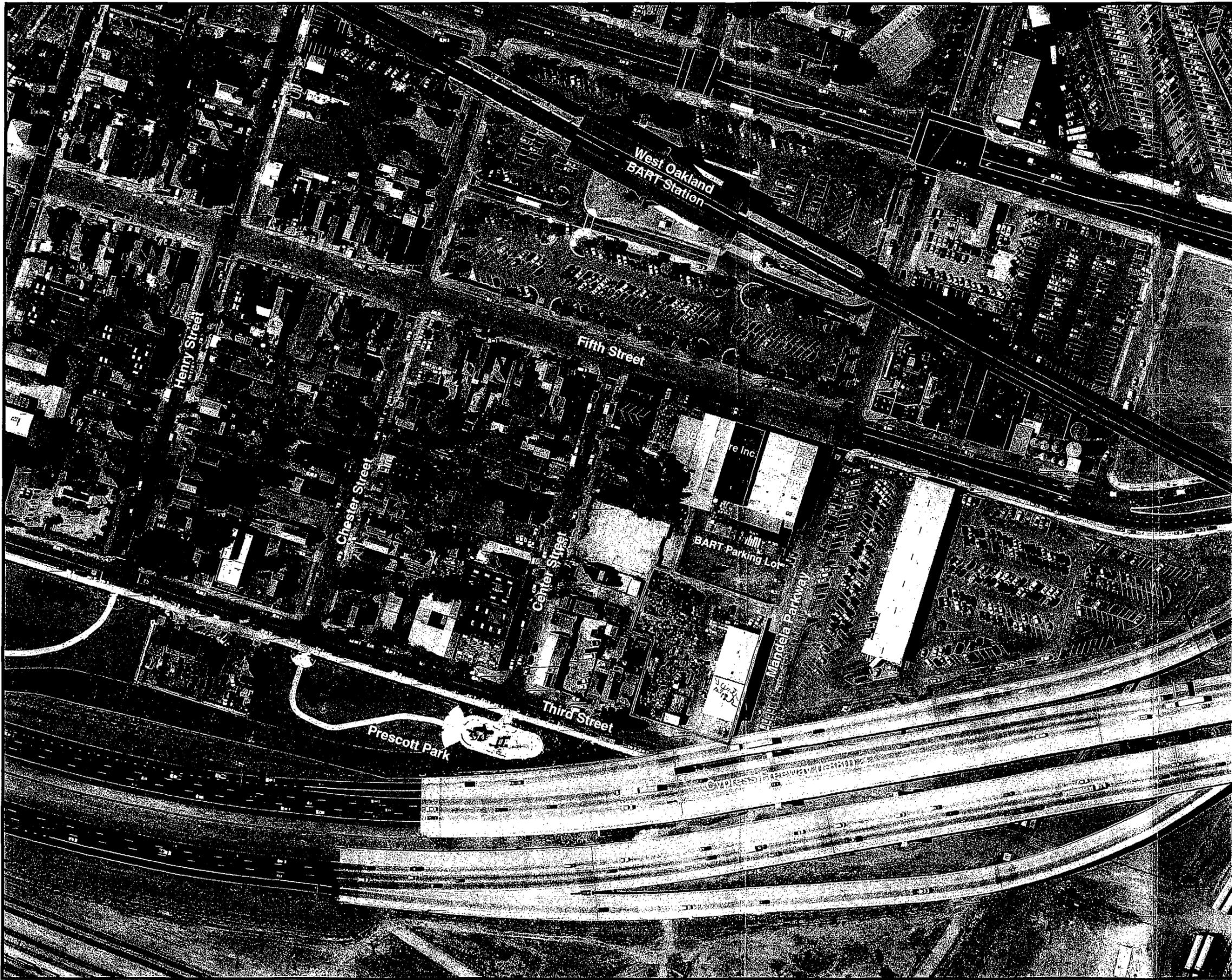
cc: Sherry Fielding, USEPA, OERR, HQ
Pat Port, U.S. Department of Interior
Lynn Nakashima, California Department of Toxic Substances Control

ATTACHMENT I
INDEX TO THE ADMINISTRATIVE RECORD

1. Remedial Investigation Sampling and Analysis Plan. AMCO Chemical Superfund Site. Part I – Site-specific Work Plan. Prepared for: U.S. Environmental Protection Agency (EPA) Region 9. Prepared by: CH2MHill. August 2004.

2. Data Validation Report. Project/Site Name: AMCO; Collection Date: October 18, 2006; Report Date: November 7, 2006; Parameters: ICP Total Metals and Mercury; Laboratory: Sentinel, Inc.; Sample Delivery Group: MY2WB3.

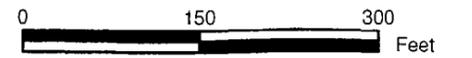
**ATTACHMENT 2
SITE LOCATION MAP**



Legend

- Former AMCO Chemical Facility Boundary

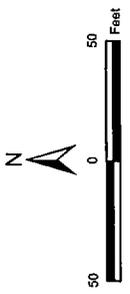
NOTE: Aerial photo taken 2002



Scale 1:1,800
CA State Plane (NAD83) Zone III

FIGURE 4
FORMER AMCO FACILITY
VICINITY MAP
REMEDIAL INVESTIGATION
AMCO CHEMICAL SUPERFUND SITE
OAKLAND, CALIFORNIA

**ATTACHMENT 3
SITE MAP**

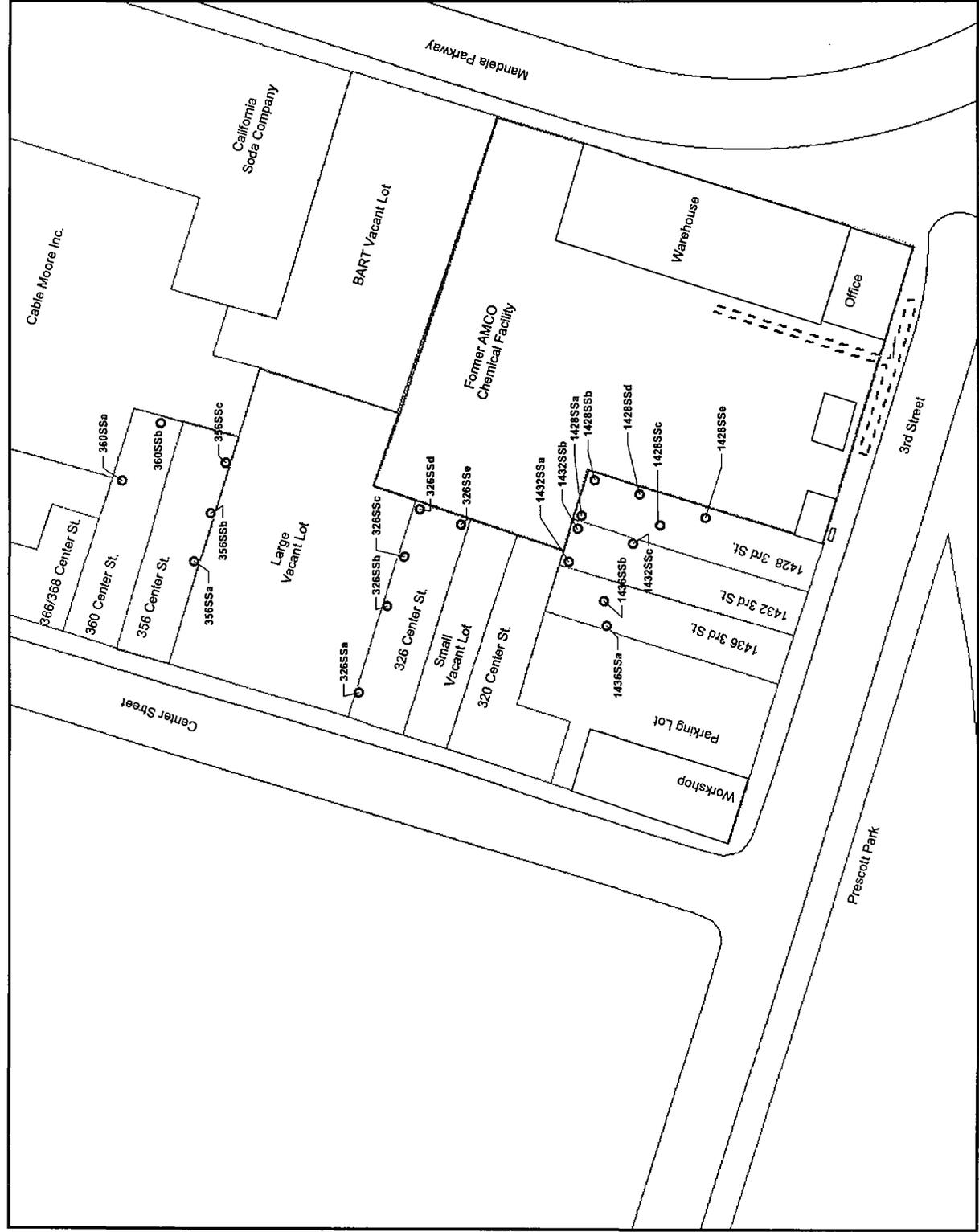


- LEGEND**
- Soil Sampling Location
 - ▭ Buildings
 - - - Former Extraction Trench
 - ▭ Former AMCO Chemical Facility Boundary

DRAFT

SOIL SAMPLE LOCATIONS
OCTOBER/NOVEMBER 2006
 REMEDIAL INVESTIGATION
 AMCO CHEMICAL SUPERFUND SITE
 OAKLAND, CALIFORNIA

CH2MHILL



AND SUPERFUND INVESTIGATION CONSULTANTS 1075 CALIFORNIA STREET, OAKLAND, CALIFORNIA 94612-4000

ATTACHMENT 4
Overall Summary of Analytical Results Collected during the RI

Description of Sampling Area	Lead (ppm) max in shallow soil samples	Lead (ppm) max in deep soil samples
Former AMCO plant property	1,710	1,710
Large vacant lot	5,130	5,130
Small vacant lot	386	NA
EPA trailer lot	2,170	2,170
Residences	167-28,600	26.2-53,000

Source: CH2M Hill sampling result, November 2006.

Notes: For residences: shallow = 0.5 - 1ft bgs; deep = 2.5 - 3ft; for other areas: shallow = 0-2 feet below concrete; deep = 2-10 feet below concrete. All results appear in mg/kg or ppm.

**ATTACHMENT 5
Residential Analytical Results**

Property Identifier	Sample ID	Lead Concentration (ppm) 0.5 – 1 foot bgs	Lead Concentration (ppm) 2.5 – 3 feet bgs	Regional Background (ppm)	Risk-based Concentration Goal (ppm)				
1	8SSe	<u>2,660</u>	<u>1,050</u>	14.7 (geologic-unit) 500 to 800 (in urban soils)	400 (EPA PRG)				
	8SSc	<u>429</u>	<u>4,170</u>						
	8SSd	2920	318						
	8SSb	<u>2,320</u>	224						
	8SSa	<u>443</u>	72						
2	2Ssa	<u>1,060</u>	<u>524</u>		14.7 (geologic-unit) 500 to 800 (in urban soils)	400 (EPA PRG)			
	2SSc	<u>2,280</u>	<u>983</u>						
	2SSb	<u>1,830</u>	<u>1,500</u>						
3	36SSa	<u>2,910</u>	<u>829</u>				14.7 (geologic-unit) 500 to 800 (in urban soils)	400 (EPA PRG)	
	36SSb	<u>3,630</u>	216						
4	26SSd	<u>28,600</u>	<u>631</u>			14.7 (geologic-unit) 500 to 800 (in urban soils)			340 (Site-specific PRG)
	26SSe	<u>1,270</u>	<u>53,000</u>						
	26SSc	167	284						
	26SSb	261	179						
	26SSa	274	35						
5	56SSa	<u>574 (822(D))</u>	223	14.7 (geologic-unit) 500 to 800 (in urban soils)				340 (Site-specific PRG)	
	56SSb	<u>563</u>	<u>432</u>						
	56SSc	<u>354</u>	26						
6	0SSa	<u>2,230</u>	193		14.7 (geologic-unit) 500 to 800 (in urban soils)				340 (Site-specific PRG)
	0SSb	<u>600</u>	<u>478</u>						

Source: CH2M Hill sampling result, November 2006.

Notes: Bolded results indicate that measured concentrations exceed the regional background concentration. Underlined results indicate properties exceeding applicable health-based benchmarks. All results appear in mg/kg or ppm. PRG - EPA R9's Preliminary Remediation Goal.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MEMORANDUM

DATE: AUG 14 2007

SUBJECT: Request for a Time-Critical Removal Action Ceiling Increase at the AMCO Chemical Superfund Site, Oakland, Alameda County, California

FROM: Harry Allen, On-Scene Coordinator
Emergency Response Section (SFD-9-2)

THROUGH: Steve Calanog, Chief
Emergency Response Section (SFD-9-2)

TO: Daniel Meer, Chief
Response, Planning & Assessment Branch (SFD-9)

I. PURPOSE

The purpose of this memorandum is to request and document approval of the proposed ceiling increase to accommodate unforeseen removal action costs at the AMCO Chemical Superfund Site ("The Site"), located near the intersection of Center Street and 3rd Street, in the City of Oakland, Alameda County, California. The Site poses the threat of release of lead, a hazardous substance in residential soils to the surrounding environment. The planned action will continue to mitigate these threats by removing lead contaminated soil. This memorandum requests an additional \$150,000 in extramural cleanup costs beyond the current ceiling.

The proposed removal of hazardous substances would be taken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(a)(1), and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415.

II. BACKGROUND

Site Status: NPL
Category of Removal: Time-Critical
CERCLIS ID: CA0001576081
SITE ID: 09QK

Please refer to the initial Action Memorandum, approved, June 21, 2007, for a description of the AMCO Site and its conditions. A re-assessment of Site conditions in July 2007 during the Removal Action identified the need to excavate additional soils at 1 residence (for a total of 7 residences) and an adjoining area which was not previously identified. Property owners previously did not provide access for soil sampling. This increase is necessary because the initial Action Memorandum underestimated the scope and cost of the work to be performed.

The situation which necessitates the current ceiling increase is the funding of additional and unanticipated measures to excavate additional areas and unanticipated soil volumes. Costs of these additional measures include labor, equipment, backfill and property restoration, and transportation and disposal of contaminated soils. Additional relocation costs will also be incurred. Furthermore, the ceiling increase is required because original relocation costs expected to be paid to the U.S. Army Corps of Engineers through an Interagency Agreement, will instead be paid by the Emergency Rapid Response Services (ERRS) contractor.

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

Current Site conditions pose the threat of potential future releases of lead, a hazardous substance present within residential soils. The likelihood of direct human exposure, via ingestion and/or inhalation of lead and the threat of potential future releases and migration of lead, poses an imminent and substantial endangerment to public health or welfare, or the environment based on the factors set forth in the NCP, 40 C.F.R. § 300.415(b)(2). These factors include:

1. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain

High concentrations of lead have been detected in samples of residential soils in properties adjacent to the former AMCO plant property. Much of the contaminated material is likely to result in human exposure via inhalation or ingestion. The additional residential area is predominantly unvegetated; however, a portion of the yards are used for gardening purposes. Lead may be entrained in naturally and mechanically generated dust and/or transported on shoes and clothing of residents passing over contaminated areas. Gardening and other yard work also may result in exposure to contamination.

Analytical results indicate that concentrations of lead identified in the residential soils exceed background and risk-based levels including the Site-specific PRG for lead (194 mg/kg considering locally-grown produce consumption and 340 mg/kg excluding locally-grown produce). Direct human contact with dust containing lead, via inhalation or ingestion, may result in eye, skin, nose and/or lung irritation. Ingestion of lead may cause organ damage and result in weakness and other neurological impairment.

Contamination is readily accessible to on-site full-time residents. Persons living on these contaminated properties, or engaging in recreational or digging activities on the property are likely to come into contact with uncontrolled hazardous substances present within the soils. Recreational activities include gardening.

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

The additional areas are comprised of barren soils with sparse vegetation. High winds may transport contaminated soils from the Site onto neighboring residential properties. Some of the homes have windows and doors open for the majority of the day and contaminants could be transported indoors due to high winds. Heavy rainfall could cause localized flooding (already documented at two of these residences), resulting in contaminated runoff which may impact adjacent properties, streets and storm sewers.

4. Availability of other appropriate Federal or State response mechanisms to respond to the release

The Site is located on private land and is therefore not under the jurisdiction of any other Federal agency. The State of California has been notified of the proposed action and has supported the Federal lead approach.

IV. ENDANGERMENT DETERMINATION

Actual and threatened releases of lead, a hazardous substance from this Site, if not addressed by implementing a Time-Critical Removal Action may continue to present an imminent and substantial endangerment to public health, or welfare, or the environment. If no action is taken, impacts will continue.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

USEPA proposes to mitigate imminent and substantial threats to human health, welfare, or the environment by taking steps to prevent the release of and exposure to lead. The removal action will include the following objectives to prevent direct human contact with environmental lead in residential soils at 1 additional property and an adjoining area:

- Restrict access and control dust emissions to protect people from potential exposure during the removal action.
- Remove surficial contamination in additional residence and adjoining area by excavating contaminated soil to achieve a lead concentration of less than 500 ppm or a depth of 1 foot below ground surface.
- Conduct confirmation sampling and analysis using X-Ray Fluorescence (XRF) and laboratory analyses.
- Transport and dispose excavated material at an off-site facility.
- Replace excavated material with clean fill, restore property to pre-removal conditions, to the maximum extent practicable, replacing patios, fences, trees and shrubs if necessary.
- Temporarily relocate families of affected residences pursuant to the Uniform Relocation Act if requested.

Under circumstances where special considerations are appropriate for the scope of the residential excavation, such as risk to property or significant duress for the resident, an alternative approach to the excavation extent may be deemed appropriate.

B. Estimated Costs

	<u>Current Ceiling</u>	<u>Proposed Increase</u>	<u>Proposed Ceiling</u>
EXTRAMURAL COSTS (AoA)			
ERRS	\$ 350,000	\$150,000	\$500,000
EXTRAMURAL COSTS (Other than AoA)			
USACE Relocation	\$25,000	(\$25,000)	\$0
START	\$30,000	\$35,000	\$65,000
Subtotal, Extramural	<u>\$405,000</u>	<u>\$160,000</u>	<u>\$565,000</u>
Extramural Contingency	\$81,000	None	\$81,000
Removal Action Ceiling	<u>\$486,000</u>	<u>\$160,000</u>	<u>\$646,000</u>

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

If the ceiling increase is not granted, lead contaminated soils will not be completely removed from residences adjacent to the AMCO Site. High concentrations of lead will continue to pose a threat to human health at the additional residence.

VII. ENFORCEMENT

Please see the initial Action Memorandum and Confidential Enforcement Addendum for a discussion regarding potentially responsible parties. In addition to the

extramural costs estimated for the proposed action, a cost recovery enforcement action also may recover the following intramural costs:

INTRAMURAL COSTS

EPA Direct Costs	\$25,000	None	\$25,000
EPA Indirect Costs (35.28%)	<u>\$180,280</u>	<u>\$56,448</u>	<u>\$236,728</u>
Intramural Subtotal	<u>\$205,280</u>	<u>\$56,448</u>	<u>\$261,728</u>

VIII. RECOMMENDATION

To eliminate the continuing threat to the human health that would be created by failure to complete the excavation of lead contaminated soils at the AMCO Site, and consistent with the removal criteria contained in Section 300.415(b)(2) of the National Contingency Plan, I recommend you approve this \$216,448 ceiling increase request. Your approval would raise the total project ceiling from \$691,280 to \$907,728 of which an additional \$150,000 are for the extramural cleanup contractor costs (Regional Allowance). You may indicate your approval or disapproval by signing below.

Because conditions at the site meet the NCP criteria for a Time-Critical Removal Action, U.S. EPA enforcement staff recommend the approval of the removal action proposed in this Action Memorandum. The total project ceiling if approved will be \$907,728, of which an estimated \$646,000 comes from the Regional Removal Allowance. Approval may be indicated by signing below.

Approve:  8/14/07
 Daniel Meer, Chief Date
 Response, Planning and Assessment Branch

Disapprove: _____ Date
 Daniel Meer, Chief
 Response, Planning and Assessment Branch

Attachments:

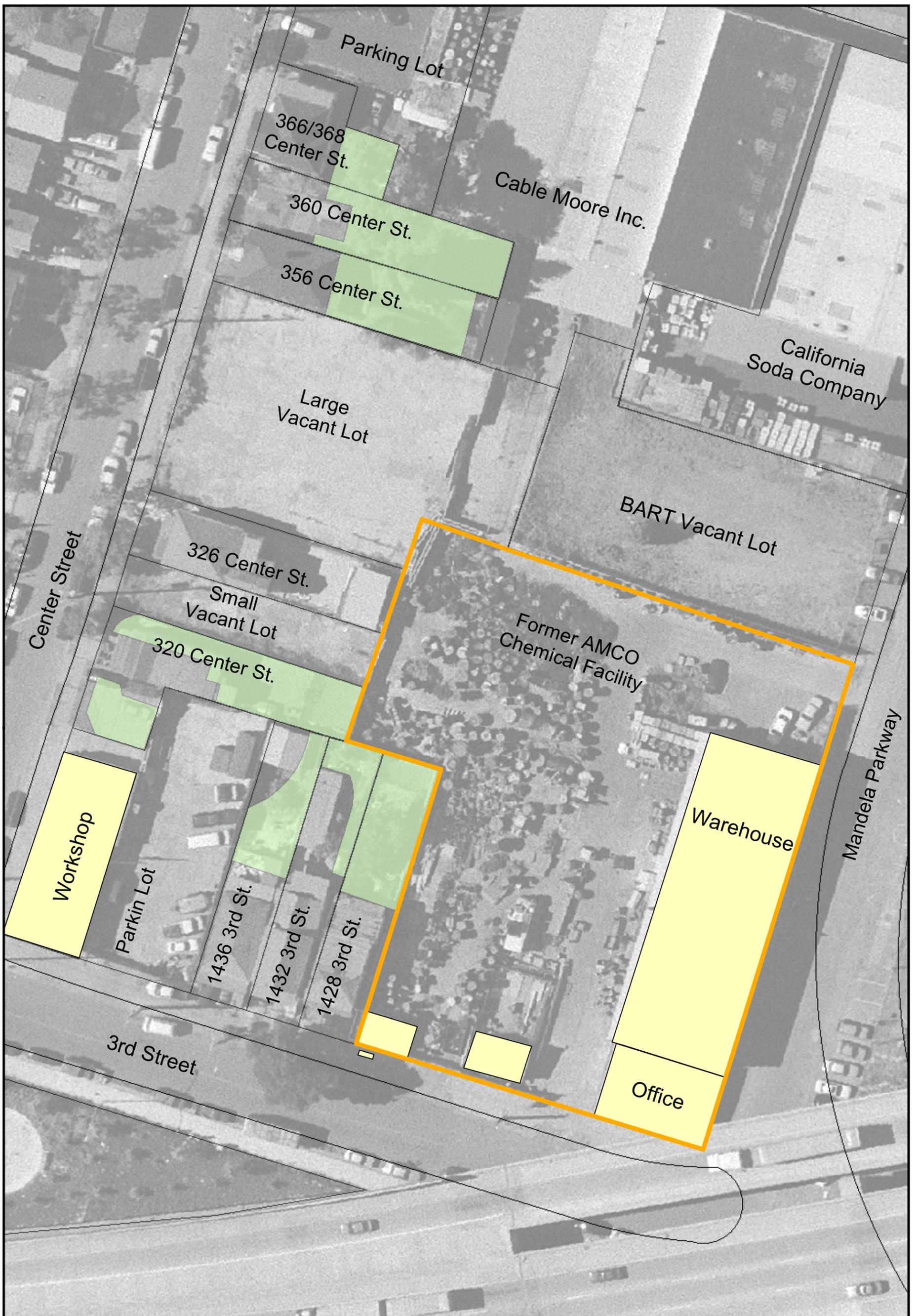
- 1. Index to the Administrative Record

**ATTACHMENT I
INDEX TO THE ADMINISTRATIVE RECORD**

1. Request for a Time-Critical Removal Action at the AMCO Chemical Superfund Site, Oakland, Alameda County, California. From: Harry Allen, to Daniel Meer, EPA Region 9. June 18, 2007.
2. AMCO Site Remedial Investigation Sampling and Analysis Plan. AMCO Chemical Superfund Site. Part I – Site-specific Work Plan. Prepared for: U.S. Environmental Protection Agency (EPA) Region 9. Prepared by: CH2MHill. August 2004.
3. Data Validation Report. Project/Site Name: AMCO; Collection Date: October 18, 2006; Report Date: November 7, 2006; Parameters: ICP Total Metals and Mercury; Laboratory: Sentinel, Inc.; Sample Delivery Group: MY2WB3.
4. Pollution Report no. 1 - Amco
5. Pollution Report no. 2

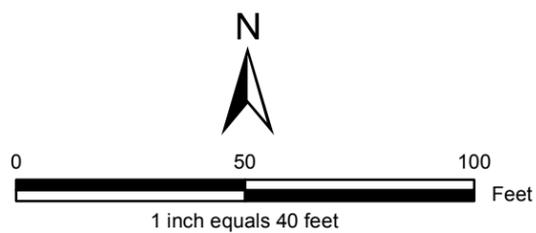
cc: Sherry Fielding, USEPA, OEM, HQ
Pat Port, U.S. Department of Interior
Lynn Nakashima, Department of Toxic Substances Control

bcc: H. Allen, SFD-9-2
John Lyons, ORC-3
C. Reiner, SFD-9-2
C. Temple, SFD-9-2
Site File



LEGEND

-  Former AMCO Chemical Facility Boundary
-  Buildings
-  Excavation Sites



**FIGURE F-1
REMOVAL ACTION LOCATIONS**

REMEDIAL INVESTIGATION
AMCO CHEMICAL SUPERFUND SITE
OAKLAND, CALIFORNIA

