



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

CONTAINS ENFORCEMENT-SENSITIVE INFORMATION

MEMORANDUM

DATE: May 29, 2012

SUBJ: Request for a Removal Action at the Charles Batchelder Company Site,
Newtown, Fairfield County, Connecticut - **Action Memorandum**

FROM: Eric Vanderboom, On-Scene Coordinator
Emergency Response and Removal Section I

THRU: David McIntyre, Chief *DMC*
Emergency Response and Removal Section I

Arthur V. Johnson III, Chief *AVJ*
Emergency Planning & Response Branch

TO: James T. Owens III, Director
Office of Site Remediation and Restoration

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action at the Charles Batchelder Company Site (the Site). Hazardous substances present in dross (material that is skimmed from the top of molten aluminum) and baghouse dust piles at the Site, if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat to human health and the environment. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the On-Scene Coordinator's (OSC's) \$200,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : CTD981069180
SITE ID# : 013M
CATEGORY : Time-Critical

A. Site Description

1. Removal site evaluation

On April 4, 2012, OSC Vanderboom, Gary Perlman from Agency for Toxic Substance and Disease Registry (ATSDR), Tony Bobowicz from Connecticut Department of Energy and Environmental Protection (CTDEEP), Kenneth Foscue from Connecticut Department of Public Health (CT DPH), Donna Culbert from Newtown District Department of Health and Rob Sibley, Deputy Director of Planning and Land Use for Town of Newtown Connecticut conducted an on-site reconnaissance, during which large piles of dross and bag-ash (waste from smelting process) were observed all around the property and in two of the remaining buildings on-site.

On April 9, 2012, OSC Vanderboom and START personnel conducted a Site Investigation. START collected 41 samples from various piles and 12 soil samples which were analyzed for metals, PCBs and volatile organic compounds (VOC) by EPA's New England Regional Laboratory (NERL).

The OSC recommended a removal action (RA) in a closure memo dated May 1, 2012.

2. Physical location

The Site is located at 46A Swamp Road, Newtown, Fairfield County, Connecticut. It is bordered to the north by a commercial property and railroad tracks operated by Housatonic Railroad, to the south, southeast, east and west by wetlands known as Pine Swamp. Land use in the area is residential and industrial. The geographical coordinates at the approximate center of the Site are latitude 41° 21' 49.0" north and longitude 73° 15' 12.7" west.

3. Site characteristics

The Site consists of multiple buildings set on a 30-acre property zoned for manufacturing, and is currently inactive. The northern third of the property is occupied by the Charles Batchelder facility and the southern two thirds of the property is occupied by Pine Swamp. Large amounts of the northern third of the property are occupied by buildings and paved areas. The northern part of the property is where approximately 20 piles of the dross material reside. There are also two large piles of the baghouse dust within the buildings. Charles Batchelder & Company Inc., the current owner, operated an on-site aluminum recycling/smelting facility between 1947 and 1987 at which time it went bankrupt.

According to the Region ArcGIS mapping tool, within one mile of the Site there are:

- 1,717 residents;

- Four water bodies (large ponds and swamp/wetlands);
- 56 streams and rivers; and
- One sole source aquifer (defined by the EPA as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer).

According to the EPA Region 1 Environmental Justice mapping tool, the Site is not in and environmental justice area.

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

The Site presents an ongoing release of hazardous substances. Large dross and baghouse dust piles, present throughout the property and buildings, contain quantities of hazardous substances as defined by 40 C.F.R. §302.4 of the NCP. Analysis of 53 samples from the Site detected PCBs, lead, arsenic, copper and cadmium in excess of CTDEEP and/or EPA/ATSDR screening levels for unrestricted residential use. In the following table, summarizing the data, highlighted entries indicate exceedences of allowable contaminant levels.

	PCB (total)	Lead	Arsenic	Copper	Cadmium
MAX	273	2,667	64	17,000	179
AVERAGE	20	793	44	8,422	55
CTDEEP	1	500	10	2,500	34
EPA/ATSDR	2				

There is evidence that trespassers, including children, visit the Site frequently to be exposed to the aforementioned hazardous substances that are accessible. Activities taking place on the piles include congregating, playing, riding bicycles, motorcycles and all-terrain vehicles.

5. NPL status

The Site is not currently on the National Priorities List, and has not received a Hazardous Ranking System rating.

B. Other Actions to Date

1. Previous actions.

EPA Region 1 conducted a removal action on the site between 11 June and 16 October

1997. Multiple drums and other containers, lead-contaminated soil and asbestos containing roofing shingles were removed from the Site and disposed of. A gravel cap was placed over PCB-contaminated soil in the former tank farm area. In addition, a 6-foot fence topped with barbed wire, encircling the entire facility, was installed.

2. **Current actions.** There are no other EPA actions.

C. State and Local Authorities' Roles

1. **State and local actions to date.**

From 19 May 1978 until 17 February 1999, CTDEEP performed numerous actions at the Site. Actions performed include inspections; issuing orders to cease discharging waters and cease and correct discharge of pollutants; fielding complaints from local residents; sampling local residents' drinking water wells; and collecting soil and groundwater samples from the area. Further details of these actions are in the site file within the "Site Investigation and Remedial Action Plan Report" submitted by Handex of Connecticut to the Office of the Financial Director of Newtown, CT.

2. **Potential for continued State/local response.**

Neither CTDEEP nor the Town of Newtown has the resources to conduct a removal action, but will continue to provide active support, public outreach and a regulatory role.

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

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

PCBs and RCRA metals contamination in surficial piles on the Batchelder property presents a threat to trespassers, residents in the surrounding area and the general public. The exposure pathways include direct exposure and exposure to dust from wind transport. Specific pathways include:

- Dermal contact while playing on the waste piles and via dust;
- Ingestion, especially by children when playing;
- Inhalation, especially by children when playing and via dust; and
- On-going exposure and recontamination due to suspension of dust from exposed soil on the 31-acre facility.

Specifically; PCBs, lead, arsenic, cadmium and copper contamination are at concentrations greater than either the CTDEEP standards for residential soils and/or EPA/ATSDR levels for unrestricted residential use.

PCBs - The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach and thyroid gland injuries.

Other effects of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans.¹

Lead - The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in the body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High level exposure in men can damage the organs responsible for sperm production.

The Department of Health and Human Services (DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.²

Arsenic - Breathing high levels of inorganic arsenic may cause sore throats or irritated lungs. Ingesting very high levels of arsenic can result in death. Exposure to lower levels

1 Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological Profile for Polychlorinated Biphenyls (PCBs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service

2 Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for Lead (Update). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling. Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic arsenic is carcinogenic to humans.³

Cadmium - Breathing high levels of cadmium can severely damage the lungs. Eating food or drinking water with very high levels severely irritates the stomach, leading to vomiting and diarrhea. Long-term exposure to lower levels of cadmium in air, food, or water leads to a buildup of cadmium in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones.

The Department of Health and Human Services (DHHS) has determined that cadmium and cadmium compounds are known human carcinogens.

The health effects in children are expected to be similar to the effects seen in adults (kidney, lung, and bone damage depending on the route of exposure). A few studies in animals indicate that younger animals absorb more cadmium than adults. Animal studies also indicate that the young are more susceptible than adults to a loss of bone and decreased bone strength from exposure to cadmium.

Although a definitive link between cadmium and human birth defects has not been established, the babies of animals exposed to high levels of cadmium during pregnancy had changes in behavior and learning ability. There is also some information from animal studies that high enough exposures to cadmium before birth can reduce body weights and affect the skeleton in the developing young.⁴

Copper – High intakes of copper can cause liver and kidney damage and even lead to death. Long-term exposure to copper dust can irritate your nose, mouth and eyes, and cause headaches, dizziness, nausea and diarrhea.

³ Agency for Toxic Substances and Disease Registry (ATSDR). 2007. Toxicological Profile for Arsenic (Update). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

⁴ Agency for Toxic Substances and Disease Registry (ATSDR). 2008. Toxicological Profile for Cadmium (Draft for Public Comment). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Exposure in high levels of copper will result in the same types of effects in children and adults. It is not known if these effects would occur at the same dose level in children and adults. Studies in animals suggest that children may have more severe effects than adults; it's not known if this would also be true in humans. There are a very small percentage of infants and children who are unusually sensitive to copper. Studies in animals suggest that ingestion of high levels of copper may cause a decrease in fetal growth.⁵

Actual or potential contamination of drinking water supplies or sensitive ecosystems [§300.415(b)(2)(ii)];

Metals and PCBs in the piles and soils present a threat to private drinking water supplies of some of the local residents and the Pine Swamp wetland abutting the property.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

Metals and PCBs in the piles and soils at the surface present a threat of migrating in dry weather conditions as fugitive dust and in extremely wet conditions, as run-off.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

No other response mechanisms exist.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances or pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The response actions described in this memorandum directly address actual or potential release of hazardous substances, which may pose an imminent and substantial

⁵ Agency for Toxic Substances and Disease Registry (ATSDR). 2004. Toxicological Profile for Copper. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service

endangerment to public health, or welfare, or the environment. Specific removal activities will include the following:

- Develop and implement a Site Health and Safety monitoring plan;
- Conduct a site walk with the cleanup contractor;
- Conduct additional sampling as needed;
- Perform public communication and outreach activities;
- Provide security services as required by the OSC;
- Inventory and document existing property conditions;
- Clear vegetation, debris and other obstructions as needed;
- Address dilapidate buildings in such a way that crews and equipment can safely extract material from within;
- Excavate contaminated soil, waste piles and any other hazardous materials encountered;
- Perform dust control and mitigation measures;
- Backfill excavations as necessary;
- Pre-treat hazardous substances if beneficial for off-site disposal options;
- Dispose of hazardous substances at EPA-approved off-site disposal facilities; and
- Repair response-related damages and security fencing as necessary.

This removal action will be conducted in a manner not inconsistent with the NCP.

2. Community relations

The OSC will remain involved with the community throughout the cleanup and will coordinate closely with state, local authorities and EPA Community Involvement Coordinators (CIC) on community relations activities.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum is designed to mitigate the threats to human health and the environment posed by the Site. The actions taken would be consistent with and will not impede any future responses.

4. Description of alternative technologies

The use of alternative technologies is not anticipated.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs:

40 CFR Part 262 Standards Applicable to Generators of Hazardous Waste:

Subpart B - The Manifest

- 262.20 : General requirements for manifesting
- 262.21 : Acquisition of manifests
- 262.22 : Number of copies of manifests
- 262.23 : Use of the manifest

Subpart C - Pre-Transport Requirements

- 262.30 : Packaging
- 262.31 : Labeling
- 262.32 : Marking

Subpart D - Recordkeeping and Reporting

- 262.40 : Recordkeeping

40 CFR Part 264 Standards for Owners and Operators of Hazardous waste Treatment, Storage, and Disposal Facilities:

40 CFR Part 264 Hazardous Waste Regulations - RCRA Subtitle C:

268-270 : Hazardous and Solid Waste Amendments Land Disposal Restrictions Rule

40 CFR Part 300.440 Procedures for Planning and Implementing Off-Site Response Actions (Off-Site Rule)

40 CFR Part 761.61: TSCA requirements for cleanup and disposal of PCBs

State ARARs:

The OSC will coordinate with State officials to identify additional State ARARs, if any. In accordance with the National Contingency Plan and EPA Guidance Documents, the OSC will determine the applicability and practicability of complying with each ARAR which is identified in a timely manner.

6. Project schedule

All work is expected to be completed within nine months from mobilization date

B. Estimated Costs

COST CATEGORY		CEILING
<i>REGIONAL REMOVAL ALLOWANCE COSTS:</i>		
ERRS Contractor		\$1,400,000.00
Interagency Agreement		\$ 0.00
<i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i>		
START Contractor		\$102,000.00
Extramural Subtotal		\$1,502,000.00
Extramural Contingency	20%	\$300,400.00
TOTAL, REMOVAL ACTION CEILING		\$1,802,400.00

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

Delayed action will increase public health risks due to increased exposure to metals and PCBs. Without the removal action described herein, conditions at the Site will remain unaddressed, and threats associated with the hazardous substances will persist.

VII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this Site.

VIII. ENFORCEMENT ... For Internal Distribution Only

See attached Enforcement Strategy.

The total EPA costs for this removal action based on full-time accounting practices that will be eligible for cost recovery are estimated to be \$1,802,400 (extramural costs) + \$48,000 (EPA intramural costs) = \$1,850,400 1.3284 (regional indirect rate) = **\$2,458,071.36⁶**.

⁶Direct Costs include direct extramural costs \$1,802,400 and direct intramural costs \$48,000. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs 32.84% x \$1,850,400, consistent with the full 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 total costs from this estimate will affect the United States' right to

IX. RECOMMENDATION

This decision document represents the selected removal action for the Batchelder Site in Newtown, Connecticut, developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision will be documented in the administrative record to be established for the Site.

Conditions at the Site meet the NCP Section 300.415 (b) (2) criteria for a removal action due to the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

Actual or potential contamination of drinking water supplies or sensitive ecosystems [§300.415(b)(2)(ii)];

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)].

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be \$1,802,400.

APPROVAL: 

DATE: 5/30/12

DISAPPROVAL: _____

DATE: _____

