UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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BOSTON, MASSACHUSETTS 02114-2023

CONTAINS ENFORCEMENT-SENSITIVE INFORMATION

MEMORANDUM

DATE: November 16, 2007

SUBJ: Request for a Removal Action at the 716 Broadway Site,
Fall River, Bristol County, Massachusetts - **Action Memorandum**

FROM: Athanasios Hatzopoulos, On-Scene Coordinator
Emergency Response and Removal Section II

THRU: Steven R. Novick, Chief
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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 716 Broadway Site, (the Site), which is located at 716 Broadway in Fall River, Bristol County, Massachusetts. Hazardous substances present in the residential structure 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 OSC's $200,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : MAN000105852
SITE ID# : 01EL
CATEGORY : Time Critical

A. Site Description

1. Removal site evaluation

On November 9, 2007, the Massachusetts Department of Environmental Protection (MassDEP) responded to a United States Postal Service employee's report to the local authorities that he observed beads resembling a "mercury like" substance on the street and the sidewalk directly in front of the Site building, and also on the walkway next to the building, located at 716 Broadway

in Fall River, Massachusetts. The building on the Site is a three story wood frame, built in approximately early 1900s. The MassDEP responded, and verified through a Jerome mercury vapor analyzer that the substance was elemental liquid mercury. The MassDEP also conducted additional air sampling inside the house and detected elevated levels of mercury vapors that were well above background levels of 0 nanograms per cubic meter (ng/m^3). In response, MassDEP hired a cleanup contractor (TMC Services, Inc.) and recovered the gross visible mercury from the Site's building interior and exterior. During that time, the MassDEP contacted EPA and requested air monitoring assistance to assess the extent of mercury contamination.

On November 9, 2007, EPA and its Superfund Technical Assessment and Response Team (START) contractor responded to the incident scene, performed a visual inspection of the spill areas, and conducted air monitoring with the Lumex Model RA915 and Jerome Model 431-X mercury vapor analyzers. The results from the air sampling activities revealed that elemental mercury and mercury vapors existed throughout the building at levels exceeding the Agency for Toxic Substances and Disease Registry (ATSDR) health based risk standard of 300 ng/m^3. The levels in the 1st floor (occupied by Mr. Thomas Gorton and Ms. Nicolle Medeiros/current owners) ranged from 10,000 up to 50,000 ng/m^3. The 2nd floor (occupied by an elderly woman) levels ranged from 17,000 to 30,000 ng/m^3. The 3rd floor (unoccupied and used for storage) ranged from 15,000 to 16,000 ng/m^3. Air concentrations in the basement where the mercury beads were originally stored, and removed by the MassDEP contractor, ranged from 12,000 to 50,000 ng/m^3. The air sampling readings outside the building were at normal background levels.

Present at the Site during the air sampling activities were: Thomas Gorton (current property co-owner), Andy Jones (MassDEP), and John Staskiewicz (Fall River Department of Health). When asked by MassDEP and EPA if he was aware of the mercury situation, Mr. Gorton stated that he was unaware of any mercury in the building, or that his actions had caused mercury to spill in the basement and other areas. He also stated that he purchased the property in August 2007, and has been doing renovation work ever since. He also stated that while cleaning the basement, he moved some of the old trash (electrical equipment, etc.) left by the previous owner to the street curbside for trash pickup and recycling. The last trash and recycling pick-up date in the immediate area occurred on Monday, November 5, 2007.

After review of the air sampling results, MassDEP, EPA and the Fall River Department of Health (FRDOH) agreed that the high levels of mercury were a significant risk to human health. This decision was made by comparing the building's mercury levels to the action numbers that have been developed by EPA in consultation with the ATSDR, June 12, 2006, Region New England Mercury Response Guide Outline. In turn, the responding agencies recommended to Mr. Gorton and to the 2nd floor tenant that they seek alternative lodging until the building is re-assessed and determined safe for re-occupancy. Mr. Gorton and the 2nd floor tenant agreed to the alternate lodging request. In addition, the responding agencies suggested to Mr. Gorton that he should attempt to aerate the building by placing air fans in as many windows possible to aerate

the building. It was decided by the responding agencies to allow the building to cross ventilate for 24 hours and reconvene the next day to re-evaluate the conditions.

On November 10, 2007, EPA, MassDEP, and FRDOH agencies returned to the Site. EPA and START conducted air monitoring inside and outside of the building with the Lumex and Jerome mercury vapor analyzers. The interior readings indicated that elevated levels of mercury were still present, while the outdoor readings around the property remained at normal background levels. However, the interior readings, possibly from the overnight ventilation activities, were considerably lower than the readings taken on November 9, 2007.

On November 13, 2007, EPA, MassDEP, and FRDOH returned to the Site to determine whether elevated levels of mercury were still present. EPA and START conducted air monitoring inside and outside of the building with the Lumex and Jerome mercury vapor analyzers. The air sampling revealed that mercury levels were non-detectable outside the building, but still existed at elevated levels throughout the interior of the building and the porch. EPA, MassDEP, and FRDOH discussed the results and the following decisions were made: 1) the City of Fall River Department of Health found that mercury levels exceeded limits for domestic habitation and formally ordered Mr. Gorton to evacuate the entire premises until further notice, pending corrective actions, and 2) MassDEP requested EPA's assistance to conduct a time critical removal action to address the mercury release.

On November 14, 2007, the responding agencies returned to Site. EPA and the MassDEP informed Mr. Gorton and the 2nd floor tenant of the above mentioned decisions and future cleanup actions that would be taken by EPA. Mr. Gorton agreed to temporarily re-locate to his parents home and the 2nd floor tenant agreed re-locate to the building across the street. In addition EPA and START conducted another round of air sampling. The results again ranged from non detectable to more than 50,000 ng/m^3.

2. Physical location

The Site is located at 716 Broadway in Fall River, Bristol County, Massachusetts. The geographic coordinates for this location 41°41'28.73" north latitude and is 71°10'11.64" west longitude. The Site is bordered by Broadway to the west, residential homes to the south and north, and St. Stanislaus School to the east.

3. Site characteristics

The Site is a privately owned residential property of approximately 0.25 acre in size. It consists of a two-family, three story, wood structure building. The building also contains a basement. The first floor is currently occupied by Thomas Gorton and Nicolle Medeiros (co-owners). Mr. Gorton and Ms. Medeiros purchased the building in August 2007. The second floor is occupied by a single elderly female that has lived there for approximately 50 years. The entire Site is

fenced. According to the 2000 Census, 30,985 people live within 1 mile, 11,486 people live within 0.5 mile, and 2,998 people live within 0.25 mile. Three schools are located within 0.25 mile of the Site with the closest (St. Stanislaus School) being adjacent to the back yard of the Site.

According to the EPA Region 1 Environmental Justice Mapping Tool, the Site is not in an environmental justice area; however, it is immediately adjacent to a primarily low-income environmental justice area.

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

A release of mercury has been identified by MassDEP and EPA. Air monitoring conducted by EPA has documented elevated levels of mercury within the building as well as the exterior porch at levels which present a significant health threat to anyone living in the building.

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

As indicated early, EPA and its START contractor have conducted air monitoring at this location. No previous removal action has been conducted at this Site. EPA is currently working with the ATSDR, MassDEP, and local health officials to determine the acceptable levels for re-habitation of the building.

C. State and Local Authorities' Roles

1. State and local actions to date

On November 9, 2007, the MassDEP hired a cleanup contractor to conduct the initial attempt in stabilizing the release of mercury. Activities conducted by the cleanup contractor included vacuuming the visible mercury beads within the building and yard areas.

2. Potential for continued State/local response

The MassDEP will continue to provide EPA with technical assistance throughout this proposed removal action. The Fall River Board of Health and ATSDR working with the DPH will also provide support as needed.

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

A. Threats to Public Health or Welfare

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)];

Air monitoring conducted by EPA and START has documented the presence of elevated levels of mercury vapors within the house. In addition, elemental mercury beads are visible in areas of the steps and basement floors. Thus, the conditions in the building pose a direct contact threat to the tenants through absorption through skin, or inhalation of the vapors.

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)];

Elemental mercury on the floors, steps, and porch of the building may be subject to further migration due to foot traffic through and from the building.

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

Weather conditions where furnaces would be turned on could ~~conducive to heat transfer may~~ enhance the volatilization of the mercury vapors and increase exposure through inhalation.

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

Due to limited resources, MassDEP and the City of Fall River has requested EPA's assistance on addressing the environmental hazards posed by this Site.

According to the ATSDR's fact sheet[1] for mercury, exposure to mercury occurs from breathing contaminated air, ingesting contaminated water and food, and having dental and medical treatments. The nervous system is very sensitive to all forms of mercury. Methylmercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on the brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems.

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[1]Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQs for Mercury, April 1999.*

Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances 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, or welfare, or the environment.[2]

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

EPA will conduct this removal action as a fund-lead action. The proposed actions will protect public health, welfare, and the environment by removing the hazardous substances and contaminated materials from the Site. Removal activities will include the following:

- Conduct a site-walk with EPA contractors
- Mobilize equipment, personnel, and supplies
- Conduct additional sampling to further characterize the extent of contamination
- If necessary provide temporary relocation of tenants
- Provide site security establish work zones and supporting facilities
- Identify cleanup options to remediate mercury contamination while minimizing generation of waste streams
- Remove and dispose of mercury and mercury contaminated materials as determined appropriate by EPA
- Achieve cleanup goals established by EPA and supporting health agencies that will allow re-occupancy into the house
- Provide off-site transportation and disposal of cleanup derived waste streams, including mercury contaminated materials and spent PPE
- Repair response-related damages, and

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2 In accordance with OSWER Directive 9360.0-34, an endangerment determination is made based on relevant action levels, cleanup standards, risk management guidance, or other relevant information published and relied upon by the Commonwealth of Massachusetts.

- Demobilize all personnel, equipment, expendables, and supplies as they are no longer needed at the site.

2. Community relations

As part of the site mobilization activities, EPA will continue to coordinate with the City of Fall River, St. Stanislaus School, and MassDEP. If the OSC determines it necessary, EPA will coordinate a public information session with the surrounding community using an EPA Public Information Officer (PIO). In addition, EPA will prepare and issue press releases and fact sheets as required. The OSC will be available at the Site during removal activities to address questions and concerns from the public.

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 at the Site would be consistent with and will not impede any future responses.

4. Description of alternative technologies

The use of alternative technologies with regard to disposal options will be further examined as the site work progresses. On-site field screening and analytical techniques will be used during the removal action

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs:

40 CFR Part 122-125 and 131: National Pollutant Discharge Elimination System (NPDES)

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

Subpart I - Use and Management of Containers
264.171 : Condition of containers
264.172 : Compatibility of waste with containers
264.173 : Management of containers
264.174 : Inspections
264.175 : Containment
264.176 : Special requirements for ignitable or reactive waste
264.177 : Special requirements for incompatible wastes

40 CFR Part 264 Hazardous Waste Regulations - RCRA Subtitle C

40 CFR Part 403: General Pretreatment for Existing and New Sources of Pollution

Federal ARARs will be met to the extent practicable considering the exigencies of the situation. The OSC will coordinate with State officials to identify additional State ARARs, if any, and will meet, to the extent practicable, each ARAR identified in a timely manner. The following, while not ARARs, will be complied with during the removal action:

29 CFR Parts 1910, 1926, and 1904: OSHA Health and Safety Regulations

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

49 CFR Parts 171-179 : Department of Transportation Regulations for Transport of Hazardous Materials

6. Project schedule

Due to the time-critical nature of this removal action, some cleanup activities have been initiated to take critical steps in preventing exposure to occupants of the building as well as immediate receptors. The major portion of this removal action will occur during the next few weeks. The removal action is anticipated to be complete with two (2) months of its commencement.

B. Estimated Costs

COST CATEGORY		CEILING
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$300,000.00
Relocation Contingency		$30,000
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$50,000.00
Extramural Subtotal		$350,000.00
Extramural Contingency	10%	$35,000.00
TOTAL, REMOVAL ACTION CEILING		**$415,000.00**

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

In the absence of the response action described herein, conditions at the Site can be expected to continue to deteriorate, and the threats associated with the presence of hazardous substances will persist. In addition, tenants affected by this release will not be able to return to their home.

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 $415,000 (extramural costs) + $50,000 (EPA intramural costs) = $465,000 X 1.33 (regional indirect rate) = **$618,450** [3].

IX. RECOMMENDATION

This decision document represents the selected removal action for the 716 Broadway Site in Fall River, Massachusetts, 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:

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[3]Direct Costs include direct extramural costs $415,000 and direct intramural costs $50,000. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs [33% x $465,000, 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 cost recovery.

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)];

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 removal action project ceiling if approved will be $415,000.

APPROVAL: _____ DATE: 11-19-07

DISAPPROVAL: _____ DATE: _____