UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SEP 13 2012

# ACTION MEMORANDUM

**SUBJECT:** Request for a Time-Critical Removal Action at the Villa Mobile Home Park Site Kannapolis, Cabarrus County, North Carolina

**FROM:** Alyssa E. Hughes, On-Scene Coordinator
Emergency Response and Removal Branch

**THRU:** A. Shane Hitchcock, Chief
Emergency Response and Removal Branch

**TO:** Franklin E. Hill, Director
Superfund Division

**SITE ID #:** B4C3

## I. PURPOSE

The purpose of this Action Memorandum pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is to request and document approval of the proposed time-critical removal action described herein for the Villa Mobile Home Park Site (the Site), located in Kannapolis, Cabarrus County, North Carolina. The Site poses a threat to public health and the environment that meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) section 300.415(b)(2) criteria for removal actions. The Site is a mobile home park where an area of buried battery casings extends into surface soils of a drainage ditch. The total project ceiling for this time-critical removal action, if approved, will be $1,080,000 of which $800,000 will be funded through the Regional Removal Allowance.

## II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: NCN000410583
Removal Category: Time-Critical Removal Action

### A. Site Description

#### 1. Removal Site Evaluation

A Removal Site Evaluation (RSE) was conducted in response to a request from the North Carolina Department of Environment and Natural Resources (DENR). The Site is isolated to

a small portion of the Villa Mobile Home Park located in Kannapolis, Cabarrus County, North Carolina. The mobile home park is comprised of several parcels over 10 acres of land containing approximately 54 mobile homes. It is bound to the north and west by Verona Street, to the south by Irene Street and to the east by McLain Road. The primary area of concern is located to the southeast of the intersection of Verona and Venice Streets. The extent of the buried battery casings and associated contamination is unknown at this time, although estimated to be contained within three parcels of the property.

On June 17, 2010 a complaint was received by the City of Kannapolis regarding battery casings found in an open channel portion of a drainage culvert at the Villa Mobile Home Park. The main area of concern is located to the south of the intersection of Verona Street and Venice Street. In August 2010, DENR Inactive Hazardous Site Branch (IHSB) and the U.S. Environmental Protection Agency's Emergency Response and Removal Branch (ERRB) observed layers of battery chips throughout the banks of the open channel. Analytical sampling identified one soil sample and its duplicate with lead concentrations of 4,130 and 5,400 milligrams/kilogram (mg/kg), an order of magnitude higher than the EPA Regional Management Level (RML) of 400 mg/kg for residential soils. Corrective measures voluntarily conducted in 2010 by the Potentially Responsible Party (PRP) included covering the exposed soil and battery casing pieces with a plastic liner and large rip rap rock. Subsequent to this action, erosion in the area damaged the protective cover on the bed and banks of the stream, exposing battery chips. In November 2011, DENR IHSB contracted S&ME to further assess the soils containing battery casings. In February and March 2012, S&ME excavated and documented test pits in the area where the battery casings were present in order to delineate the horizontal and vertical extent of battery casings in the vicinity of the open channel.

In July 2012, EPA ERRB and DENR IHSB met on-site to perform X-Ray Fluorescent (XRF) screening and lab analysis of samples at several locations in the vicinity of the test pits excavated during the S&ME investigation. Ten locations were screened at the surface, near surface (0-6"), and subsurface (ranging from 1-3' below ground surface). Of the ten locations, five samples were collected for lab analysis. Lead concentrations for near surface screening ranged from 30 mg/kg to 5,015 mg/kg. Screening results at locations VMHP-120712-SS02 and VMHP-120712-SS07, indicated concentrations of 938 and 5,015 mg/kg of lead respectively, both of which exceed the residential removal management level (RML) of 400 mg/kg of lead. Laboratory analysis of samples collected at these locations shows concentrations of 478 and 5,940 mg/kg of lead. Five out of seven locations where subsurface screening was performed indicate lead concentrations that exceed the residential RML for lead. Values range from 597 to 3,451 mg/kg of lead. Analytical sampling results at locationsVMHP-120712-04SB and VMHP-120712-07SB indicate concentrations of 2,550 and 2,600 mg/kg of lead, which exceed the residential RML.

Subsurface samples ranged from one to three feet in an effort to target the estimated depth of buried battery casings observed during the test pit investigation conducted by S&ME. The footprint of the buried battery casings extends into the stream that transects the property. This drainage feature is approximately 3 feet below ground surface leading to the presence of battery casings throughout the northern bank and bed of the stream. In this area the contamination in the subsurface visibly transitions to the surface.

Samples collected at the outfall of the drainage feature indicate elevated levels of lead. Although these concentrations do not exceed the residential RML for lead, the results seem to provide evidence for the potential downstream migration of battery casings.

After a review of Site conditions and data generated from the RSE, the ERRB concluded that the Site meets the criteria as set forth in 40 CFR 300.415 (b)(2) for a time-critical removal action.

**2. Physical Location**

The Site is located near the intersection of Venice Street and Verona Street in Kannapolis, Cabarrus County, North Carolina. The geographic coordinates are 35.485786 ° N, -80.607892 ° W. The surrounding land use to the north, south and west is residential. The area to the east is wooded. Groundwater is expected to flow to the stream channel that transects the Site, which then flows east approximately 500 feet through piping where it discharges to Coldwater Creek, which ultimately flows into Lake Concord approximately ½ mile from the boundary of the mobile home park.

**3. Site Characteristics**

According to residents at the Villa Mobile Home Park, during periods of heavy precipitation, the current piped stream cannot contain the water flow and the stream overflows from the headwall located on the north side of Venice Street and flows overland to the open area approximately 100 feet downstream. This overland flow is estimated to be partially responsible for the erosion of the stream, causing the battery casings to be exposed.

At the time the Site was discovered, three trailers were located in the area closest to the open drainage. Two of these trailers were removed following the last S&ME investigation. During a demographic survey conducted in July 2012, DENR IHSB discovered approximately 70 adults and 70 children reside in the mobile home park.

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

Lead is a hazardous substance as listed in 40 CFR § 302.4, and referred to in Section 101(14) of CERCLA, as amended. Human exposure to lead contaminated soil at the Site poses a significant threat to public health. Direct contact, ingestion and inhalation are the primary pathways of exposure. Continued exposure to the soil contaminated with concentrations of lead exceeding the removal action level may pose chronic health effects to persons living nearby.

**5. NPL Status**

The Site is not listed on the National Priority List (NPL).

### 6. Maps, pictures and other graphic representations

Maps, pictures and other graphics can be found in the attachment.

## B. Other Things Actions to Date

### 1. Previous Actions

In 2010, the PRP voluntarily installed a liner and rip rap to the open channel to prevent exposure.

### 2. Current Actions

Currently there are no government or private actions taking place at the Site.

## C. State and Local Authorities' Roles

### 1. State and local actions to date

The State has contracted consultant S&ME to perform various site investigations.

### 2. Potential for continued state/local response

The EPA will continue to coordinate with the State during the course of the removal action. DENR is investigating the possibility of addressing the continued drainage problem on the property. This work is not within the scope of any CERCLA removal action, but coordination would present the ideal scenario for concurrently addressing the lack of sufficient storm water management.

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

Lead present in on-site surface and subsurface soils meets the requirements for initiating a time-critical removal action according to the criteria listed in Section 300.415 (b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP):

***Section 300.415 (b)(2)(i) Actual or potential exposure to nearby human populations, or the food chain from hazardous substances pollutants or contaminants;*** Investigation of the Site has documented that several sampling locations exhibit lead concentrations in surface and subsurface soil that exceeds RML of 400 mg/kg for residential land use settings. The lead contamination is located within the boundaries of a mobile home park, a residential community of approximately 150 people.

***Section 300.415 (b)(2)(ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;*** The neighboring City of Concord utilizes Lake Concord as a source for its municipal water supply. Potential contamination of this water body exists due to the possibility

that lead could migrate via the piped channel into Coldwater Creek which ultimately discharges into Lake Concord. Coldwater Creek is designated WS-IV; CA (Water Supply-IV/Highly developed; Critical Area).

***Section 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;*** Analytical results reveal that elevated lead levels are present in surface soils and in the open channel creating a potential for downstream migration. Visual inspection indicates battery casings throughout the banks of the drainage ditch. The presence of battery chips in the vicinity of the McLain Road outfall supports the possibility of contaminant migration through the piped channel due to high flow rate following periods of heavy precipitation. Lead concentrations in samples collected from the drainage ditch exceed the residential RML by an order of magnitude.

***Section 300.415 (b)(2)(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;*** As stated above, the presence of exposed battery casings in the open channel have the potential to migrate through the piped portion of the drainage feature during periods of heavy rainfall. The drainage feature discharges to Coldwater Creek and ultimately flows into Lake Concord, approximately ½ mile from the Site.

**Section 300.415 (b)(2)(vii)** ***The availability of other appropriate federal or state response mechanisms to respond to the release***; There are no other federal agencies available to respond. DENR requested EPA assistance with the removal action at the Villa Mobile Home Park and has indicated it lacks the resources necessary to deal with the threat.

## 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, welfare or the environment.

## V. PROPOSED ACTIONS AND ESTIMATED COSTS

### A. Proposed Actions

#### 1. Proposed action description

The EPA proposed actions include the following:

a. Excavate soil exceeding the RML from source area and along the run off pathway;

b. Evaluate the need to remove contaminated soil from the drainage pathway to prevent downstream migration;

c. Provide temporary on-site storage of contaminated soils generated during removal and decontamination activities, pending further waste characterization and profiling/treatment/reuse/recycling;

d. Conduct in-situ/ex-situ screening and/or collect samples for laboratory analysis as necessary;

e. Perform on-site treatment of characteristically hazardous waste;

f. Arrange for off-site transportation and disposal/treatment /recycling/reuse of hazardous substances according to applicable regulations.

g. Maintain site security and limit access during implementation of the removal action; and

h. Conduct all removal actions pursuant to an EPA approved Health and Safety Plan.

**2. Contribution to Remedial Performance**

The proposed removal action is warranted to address the threats discussed in Section III, which meet the NCP Section 300.415 (b) (2) removal criteria. The removal action contemplated in this Action Memorandum would be consistent with any remedial action.

**3. Applicable or relevant and appropriate requirements (ARARs)**

In accordance with the NCP at 40 CFR § 300.415(j), on-site removal actions conducted under CERCLA are required to attain applicable or relevant and appropriate requirements (ARARs) to the extent practicable considering the exigencies of the situation or provide grounds for invoking a CERCLA waiver under Section 121(d)(4). In determining whether compliance with ARARs is practicable; the lead agency may consider appropriate factors, including (1) the urgency of the situation; and (2) scope of the removal action to be conducted. Additionally, under 40 C.F.R. § 300.405(g)(3), other advisories, criteria, or guidance may also be considered (so-called To-Be-Considered or TBC) when conducting the removal action.

Under CERCLA Section 121(e)(1), federal, state or local permits are not required for the portion of any removal or remedial action conducted entirely on-site as defined in 40 CFR. § 300.5. See also 40 CFR. §§300.400(e)(1) & (2). On-site means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action. On-site response actions must comply, to the extent practicable, with substantive but not administrative requirements of ARARs. Off-site activities such as transportation and disposal of wastes are required to comply with all applicable requirements, including the administrative portions.

As provided in CERCLA Section 121(d)(3) and the Off-site Rule at 40 CFR. §300.440 *et seq*. the off-site transfer of any hazardous substance, pollutant or contaminant generated during the response action will be sent to a treatment, storage or disposal facility that is in compliance with applicable federal and state laws and has been approved by the EPA for acceptance of CERCLA waste.

A letter was sent to the State of North Carolina on September 12, 2012, requesting identification of any State ARARs for the EPA's consideration prior to initiation of the on-site response action activities. Initial communications are taking place with the State to identify ARARs. Depending upon results of further investigation of the Site, additional ARARs may be applicable. The EPA On-Scene Coordinator (OSC) is in communication with the State to develop an approach consistent with all ARARs as practicable.

**4. Project Schedule**

Removal activities are anticipated to begin within two weeks of approval of this Action Memorandum and receipt of funding for proposed actions. It is anticipated that once activities begin, this removal action will take approximately eight weeks of on-site work to complete.

**B. Estimated Costs**

| | |
|---|---|
| **Extramural Costs:** | |
| Regional Removal Allowance Costs: | |
| ERRS | $800,000 |
| Other Extramural Costs Not Funded from the Regional Allowance: | |
| START | $100,000 |
| Subtotal, Extramural Costs | $900,000 |
| Costs Contingency (20%) | $180,000 |
| **TOTAL EXTRAMURAL COSTS** | **$1,080,000** |

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

If this response action is significantly delayed or not taken, the public will continue to be exposed to contaminant levels exceeding the Removal Management Levels (RML). In addition, the likelihood of off-site migration increases, potentially exposing more of the public and contaminating more of the environment.

## VII. OUTSTANDING POLICY ISSUES

No outstanding policy issues have been identified at this time.

## VIII. ENFORCEMENT

Enforcement activities have been initiated and are ongoing. It is expected that this Site will be conducted as a fund-lead removal action. See Attachment 1, "Enforcement Addendum" for more detail.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be $1,663,446 using the following formula:

(Total Extramural Costs + Total Intramural Costs) + (40.97% (Total Extramural Costs + Total Intramural Costs) = Estimated EPA Costs, or ($1,080,000 + $100,000) + ((40.97% * ($1,080,000 + $100,000)) = $1,663,446[1]

## IX. RECOMMENDATION

This decision document represents the selected removal action for the Villa Mobile Home Park Site, in Kannapolis, Cabarrus County, North Carolina, 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.

Conditions at the Site meet the NCP section 300.415(b) criteria for a removal action. This removal action is anticipated to be fund-lead, with a total project ceiling, if approved, of **$1,080,000**, of which approximately **$800,000** will be funded by the Regional Removal Allowance. I recommend your approval of the proposed removal action.

APPROVED: _____ DATE: 9/13/12
Franklin E. Hill, Director
Superfund Division

DISAPPROVED: _____ DATE: _____
Franklin E. Hill, Director
Superfund Division

Attachments:
Enforcement Addendum
Photographs
Figures

[1]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 directs 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 total costs from this estimate will affect the United States' right to cost recovery.