



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

EMERGENCY RESPONSE BRANCH 1

25089 CENTER RIDGE ROAD

WESTLAKE, OH 44145

SEP 21 2010

MEMORANDUM

SUBJECT: ACTION MEMORANDUM AMENDMENT – Request for Ceiling Increase, Exemption from the \$2 Million Statutory Limit, Redefine The Site Description, and Scope of Work for a Time-Critical Removal Action at the New Lyme Metals Site, Jefferson, Ashtabula County, Ohio (Site ID #B5VC)

FROM: James Justice, On-Scene Coordinator
Emergency Response Branch 1/Response Section 1

THRU: Jason H. El-Zein, Chief
Emergency Response Branch 1

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

The purpose of this memorandum is to request and document your approval for a ceiling increase of \$3,116,937, and to grant an exemption from the \$2 Million Statutory Limit in order to complete a time-critical removal action at the New Lyme Metals Site (the New Lyme Site, or the Site) in Jefferson, Ohio. The proposed ceiling increase will bring the total project ceiling to \$3,240,909, when combined with the previously approved project ceiling. The redefining of the Site and the change in scope is necessary based on the findings of delineation sampling conducted under the original Action Memorandum approved on May 20, 2010.

The extended removal actions proposed herein will consist of the following: excavate, treat and/or transport and dispose of all sediments, soils and wastes impacted by heavy metals, Polychlorinated Biphenyls (PCBs) and asbestos; dispose of wastes containerized in drums or cylinders; and take any other response actions necessary to address any release or threatened release of a hazardous substance, pollutant or contaminant that the U.S. EPA On-Scene Coordinator (OSC) determines may pose an imminent and substantial endangerment to the public health and welfare. This removal action will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), to abate or eliminate the immediate threat posed to public health and/or the environment by the presence of the hazardous substances at the Site. The uncontrolled conditions of the hazardous substances present at the Site require that this removal



action be classified as time-critical. This removal action will require approximately 90 on-site working days to complete.

There are no nationally significant or precedent-setting issues associated with the Site and the Site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID #OHN000510416

A. Physical Location and Description

This modifies the description of the Site presented in the May 20, 2010, Action Memorandum to include an additional parcel located immediately to the west of the original property boundaries.

The New Lyme Metals property is located at 618 State Route 6 in Jefferson, New Lyme Township, Ashtabula County, Ohio, 44047 (see Attachment IV). The geographical coordinates for the Site are Latitude 41.604995° North and Longitude 80.764439° West. The Site is comprised of the three parcels comprising the New Lyme Metals property and the residential parcel adjacent and immediately to the west of the New Lyme Metals property. The Site is located in a rural area of New Lyme Township. Approximately 150 people live within 1 mile of the Site.

B. Site Background

From July 12 through July 16, 2010, based on the previously approved Action Memorandum, U.S. EPA initiated a Removal Action at the Site utilizing the Emergency Rapid Response Service (ERRS) contractor, which included the following response actions (Please refer to original Action Memorandum in Attachment VI for additional details):

- Documentation of Site conditions;
- Sample collection for the delineation of Toxicity Characteristic Leaching Procedure (TCLP) metals and PCBs in surface and subsurface soils; and
- Soil monitoring using an x-ray fluorescence (XRF) detector to determine the presence and delineate the extent of heavy metals on and adjacent to the New Lyme Metals property.

U.S. EPA collected a total of 143 samples from waste, debris and soils across the New Lyme Metals property and the neighboring property immediately to the west. These samples were collected in a 20 foot by 20 foot grid pattern (See Attachment IV) and at varying depths (0-3 feet, 3-6 feet and 6-9 feet below grade), in order to determine several key factors:

- The total quantity of waste, debris and soils at the Site;
- Which areas exceeded direct contact screening levels for heavy metals;
- Which areas exhibited levels of PCBs above the limit of 50 milligrams per kilogram

- (mg/kg) set forth in the Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601-2692;
- Which areas exhibited characteristics of toxicity (exceeding RCRA regulatory TCLP (leachable) levels for 1 or more of eight heavy metals); and
 - Which areas contained debris that exhibited levels exceeding TSCA regulations as well as TCLP limits.

Additionally, 3 sediment samples were collected from a creek down gradient from the Site and 2 wipe samples were collected from the floor of the pole barn on Site to further assess and delineate the areas impacted by heavy metals and PCBs.

This delineation was necessary in order to develop a cost estimate for the removal action and to determine if on-site treatment of the material would result in significant cost savings.

Waste, debris and soil samples collected during the July 12 through July 16, 2010, Removal Action revealed the following TCLP Metals results (See Attachment V Summary Data Table):

- TCLP Cadmium – The 143 samples ranged from Non-Detect to 2.60 mg/L with seven samples above the TCLP Cadmium regulatory limit of 1.00 mg/L (samples C7-S1 [1.42], C9-S1 [2.60], C10-S1 [2.18], D6-S1 [1.87], F5-S1 [1.35], H7-S1 [1.09], and J2 [1.11]);
- TCLP Lead – The 143 samples ranged from Non-Detect to 14.3 mg/L with five samples above the TCLP Lead regulatory limit of 5.00 mg/L (samples A2-S1 [12.3], C9-S1 [6.66], C10-S1 [7.13], I1 [7.60], and J2 [14.3]);

The samples were also analyzed for PCB content (See Attachment V). Of the 143 samples collected and analyzed for PCBs, 71 were above the residential property action level of 1 mg/kg for Total PCBs (Ohio Administrative Code [OAC] 3745-300-08 Residential Land Use Category Generic Direct Contact Standard for the Single Chemical criteria). Seventeen of the 71 samples that were above the direct contact action level were also above the TSCA limit of 50 mg/kg (samples B7-S1 [2,100], B8-S1 [220], C8-S2 [260], C9-S1 [1,500], D6-S1 [200], D7-S2 [160], E6-S1 [170], E6-S2 [150], E7-S1 [63], E8-S1 [130], E8-S2 [1,700], F5-S1 [60], F5-S2 [110], F7-S2 [1,800], H6-S1 [210], I7-S1 [65], and K7-S1 [530]).

In addition, analysis of the sediments samples detected PCBs; however, the concentration was below the action level of 1 mg/kg. One of the wipe samples from the floor of the pole barn did exceed the action level of 10 micrograms per 100 square centimeters (10 ug/cm²) at 26 ug/cm².

Screening of surface soils at the grid locations identified that 50% of the areas had heavy metal concentrations above the residential direct contact criteria in Ohio. These included arsenic as high as 91 mg/kg (action level 6.7 mg/kg), cadmium as high as 883 mg/kg (action level 72 mg/kg), lead as high as 4,700 mg/kg (action level 400 mg/kg), mercury as high as 62 mg/kg (action level 7.6 mg/kg) and zinc as high as 25,000 mg/kg (action level 23,000 mg/kg). The highest levels of lead and arsenic were located on the parcel of residential property immediately to the west of the New Lyme Metals property.

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

The conditions present at the New Lyme Site present an imminent and substantial threat to the public health, or welfare, and the environment based upon the factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), as amended, 40 CFR Part 300. These factors include, but are not limited to, the following (Please refer to Section III of the original Action Memorandum signed on May 20, 2010 for detailed description of Threats to Public Health, Welfare, or the Environment identified during U.S.EPA investigations on December 9, 2009 and February 18, 2010. The following description supplements that set forth in Section III of the original Action Memorandum.):

1) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

As identified in the original Action Memorandum, heavy metals and PCBs have been identified in surface soils of the Site. Sampling indicated the presence of leachable lead concentrations as high as 12.3 mg/L, which is more than double the regulatory limit of 5 mg/L. This was not identified in previous investigations. Elevated levels of zinc (25,000 mg/kg) were also detected during screening of surface soils at the Site. In addition, elevated levels of lead (4,700 mg/kg) and arsenic (91 mg/kg) were identified in surface soils on a neighboring residential property to the west of the New Lyme Metals property.

Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQ for zinc indicates harmful effects generally begin at levels 10-15 times higher than the amount needed for good health. Large doses taken by mouth even for a short time can cause stomach cramps, nausea, and vomiting. Taken longer, it can cause anemia and decrease the levels of your good cholesterol. Inhaling large amounts of zinc (as dusts or fumes) can cause a specific short-term disease called metal fume fever. The long-term effects of breathing high levels of zinc are unknown. The Department of Health and Human Services (DHHS) and the International Agency for Research on Cancer (IARC) have not classified zinc for carcinogenicity.

According to the ATSDR ToxFAQ, breathing high levels of inorganic arsenic can cause sore throat and/or irritated lungs. Ingesting very high levels of arsenic can result in death. Exposure to lower levels 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. 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 (ATSDR, 2007).

According to the ATSDR ToxFAQ for lead, exposure can affect almost every organ and system in your 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 (ATSDR, 2007b).

2) High levels of hazardous substances or pollutants or contaminants in soils at or near the surface, that may migrate;

Concentrations of arsenic, cadmium, lead, mercury and zinc above the Ohio residential direct contact criteria were identified in surface soils covering approximately 50% of the Site. Additionally, the highest levels of arsenic and lead that were detected were found in surface soils outside of the original Site boundary (as defined in the previous Action Memorandum) on a residential property immediately adjacent to the New Lyme Metals property. PCBs were also detected in sediments of a creek down gradient of the Site indicating that contaminants are migrating off Site.

IV. ENDANGERMENT DETERMINATION

Refer to previous Action Memorandum signed on May 20, 2010 (Attachment VI).

V. EXEMPTION FROM STATUTORY LIMITS

Section 104(c) of CERCLA, as amended, limits a Federal emergency response to \$2 million unless three criteria are met. The quantities and levels of hazardous substances at the New Lyme Site warrant the \$2 million exemption based on the following factors:

A) There is an immediate risk to public health or welfare or the environment;

The delineation sampling that was conducted under the approved Action Memorandum of May 20, 2010, identified high concentrations of heavy metals and PCBs in surface and subsurface soils covering approximately 50% of the Site. The concentrations of these heavy metals exceeded Ohio residential direct contact standards for arsenic, cadmium, lead, mercury, zinc and PCBs. Previous sampling also indicated the presence of antimony above direct contact standards as well as the presence of asbestos and compressed gas cylinders of unknown contents. Additionally, sample results indicate that contaminants are migrating off the Site based on the presence of PCBs in sediments of a creek down-gradient of the Site and high concentrations of arsenic and lead in surface soils of an adjacent residential property. The presence of these high concentrations of heavy metals poses an immediate and continued risk to human health, welfare and the environment.

B) Continued response actions are immediately required to prevent, limit, or mitigate an emergency;

Continued response actions are required in order to mitigate the high concentrations of metals and PCBs in surface soils, remove the asbestos-containing materials, identify and dispose of all the compressed gas cylinders and drums and to prevent the further documented migration of metals and PCBs off the Site.

C) Assistance will not otherwise be provided on a timely basis

When the Site was referred to U.S. EPA, Ohio EPA stated that they did not have the ability or sufficient funding to undertake the cleanup that is necessary. Local authorities are unable to take action at this time. A viable PRP has not been identified.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

Per the previous Action Memorandum signed on May 20, 2010, U.S. EPA conducted characterization sampling from July 12 through July 16, 2010, in order to delineate the wastes and minimize the volume of mixed waste that would be transported off-site for disposal. Initial estimated costs were approximately \$220 to \$350 per ton for a mixed waste; however, based on the additional sampling that was conducted, wastes will be able to be segregated into various waste streams including: TSCA PCB, leachable metals, mixed wastes and non-hazardous wastes. The ability to segregate the wastes results in significant cost savings. The OSC proposes to undertake the following response actions to mitigate threats posed by the presence of hazardous substances at the New Lyme Metals Site:

1. Develop and Implement a Site Health and Safety Plan;
2. Demolish unsafe and contaminated structures that are present on Site;
3. Excavate all waste, debris, soils and sediments impacted by heavy metals, PCBs and asbestos both on and off the Site;
4. Perform on-site treatment (if cost effective) of contaminated soils and debris from the property;
5. Consolidate and package hazardous substances, pollutants and contaminants contained in cylinders and drums for transportation and off-site disposal to a RCRA/CERCLA-approved disposal facility in accordance with U.S. EPA's Off-Site Rule (40 CFR § 300.440);
6. Transport and dispose of any hazardous substances, pollutants and contaminants at a off-site RCRA/CERCLA-approved disposal facility in accordance with U.S. EPA's Off-Site Rule (40 CFR ' 300.440);
7. Backfill and restore excavated areas as necessary;

8. Take any other response actions to address any release or threatened release of a hazardous substance, pollutant, or contaminant that the EPA OSC determines may pose an imminent and substantial endangerment to the public health or the environment.

The removal actions will be conducted in a manner not inconsistent with the NCP. The OSC has initiated planning for the provision of post-removal Site controls consistent with Section 300.415(l) of the NCP.

The threats posed by uncontrolled substances considered hazardous meet the criteria listed in Section 300.415(b)(2) of the NCP, and the response actions proposed herein are consistent with any long-term remedial actions which may be required. Elimination of hazardous substances, pollutants and contaminants that pose a substantial threat of release is expected to minimize substantial requirements for post-Removal Site controls.

The estimated costs to complete the activities outlined above are summarized below. These activities will require an estimated 90 on-site working days to complete. Detailed cleanup contractor costs are presented in Attachment II and the full Independent Government Cost Estimate is presented in Attachment III.

REMOVAL PROJECT CEILING ESTIMATE

<u>EXTRAMURAL COSTS:</u>	<u>Current Ceiling</u>	<u>Proposed Increase</u>	<u>Proposed Ceiling</u>
<u>Regional Removal Allowance Costs:</u>			
Total Cleanup Contractor Costs (This cost category includes estimates for ERRS, and subcontractors.)	\$71,527	\$2,030,394	\$2,101,921
Contractor Contingency 20%	\$14,305	\$406,079	\$420,384
Subtotal ERRS	\$85,832	\$2,436,473	\$2,522,305
<u>Other Extramural Costs Not Funded from the Regional Allowance:</u>			
Total START, including multiplier costs	\$21,970	\$273,907	\$295,877
Subtotal, Extramural Costs	\$107,802	\$2,710,380	\$2,818,182
Extramural Costs Contingency (15% of Subtotal, Extramural Costs)	<u>\$16,170</u>	<u>\$406,557</u>	<u>\$422,727</u>
TOTAL, REMOVAL ACTION PROJECT CEILING	\$123,972	\$3,116,937	\$3,240,909

Applicable or Relevant and Appropriate Requirements

The action levels set forth in Ohio Administrative Code 3745-300-08 Residential Land Use Category, Generic Direct Contact Standard for a Single Chemical have been identified as the applicable and relevant and appropriate requirements (ARARs). The ARARs will be complied with to the extent practicable.

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

Refer to previous Action Memorandum signed on May 20, 2010.

VIII. OUTSTANDING POLICY ISSUES

None.

IX. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum, attached to the original Action Memorandum.

The total EPA costs of this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$5,368,581¹.

$$(\$3,240,909 + \$80,000) + (61.66\% \times \$3,320,909) = \$5,368,581$$

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

X. RECOMMENDATION

This decision document represents the selected removal action for the New Lyme Metals Site located in Jefferson, New Lyme Township, Ashtabula County, Ohio. This document has been 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 (see Attachment I).

Conditions at the Site meet the NCP § 300.415(b)(2) criteria for a time-critical removal action. The total project ceiling, if approved, will be \$3,240,909. Of this, as much as \$2,945,032 comes from the Regional removal allowance. You may indicate your decision by signing below.

APPROVE: Richard C. Ke Date: 9-21-10
Director, Superfund Division

DISAPPROVE: _____ Date: _____
Director, Superfund Division

Enforcement Addendum

- Attachments: I. Administrative Record Index
II. Detailed Cleanup Contractor Cost Estimate
III. Independent Government Cost Estimate
IV. Site Figure
V. Summary Data Table
VI. Original Action Memorandum

cc: D. Chung, U.S. EPA, 5202-G
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ENFORCEMENT ADDUNDUM

**NEW LYME METALS SITE
618 US HIGHWAY 6 E, NEW LYME, ASHTABULA COUNTY, OH
SEPTEMBER 2010**

Refer to previous Action Memorandum signed on May 20, 2010 (Attachment VI). There is no change to the enforcement status of this site.

ATTACHMENT 1

U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

ADMINISTRATIVE RECORD FOR NEW LYME METALS SITE NEW LYME, ASHTABULA COUNTY, OHIO

ORIGINAL
(SDMS ID: 363356)
MAY 20, 2010

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	04/00/99	ATSDR	File	ToxFAQs for Mercury CAS #7439-97-6 (SDMS ID: 348218)	2
2	02/00/01	ATSDR	File	ToxFAQs for Poly- chlorinated Biphenyls (SDMS ID: 276907)	2
3	09/00/01	ATSDR	File	ToxFAQs for Asbestos CAS #1332-21-4 (SDMS ID: 363332)	2
4	02/02/05	Novak, P., U.S. EPA	Restaino, T., U.S. EPA	Memorandum re: Transmit- tal of PCB Compliance In- spection Report for the New Lyme Metals Site (SDMS ID: 363333)	67
5	08/00/07	ATSDR	File	ToxFAQs for Arsenic CAS #7440-38-02 (SDMS ID: 348194)	2
6	08/00/07	ATSDR	File	ToxFAQs for Lead CAS #7439-92-1 (SDMS ID: 363334)	2
7	09/01/08	ATSDR	File	ToxFAQs for Cadmium CAS #774-43-9 (SDMS ID: 363335)	2
8	09/09/09	Clouse, K., Ohio EPA	Durno, M., U.S. EPA	Letter re: Ohio EPA's Request for U.S. EPA As- sistance in Conducting a Potential Time-Critical Removal Action at the New Lyme Salvage Yard w/Attached Removal Action Referral Package (SDMS ID: 363336)	23
9	03/04/10	Lam. S., U.S. EPA	Kollar, K., Ohio EPA	Letter re: U.S. EPA Re- quest for ARARs for the New Lyme Metals Site (SDMS ID: 363337)	2

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
10	04/22/10	Weston Solutions, Inc.	U.S. EPA	Site Assessment Report for the New Lyme Metals Site (SDMS ID: 363338)	193
11	04/27/10	ATSDR	File	ToxFAQs for Antimony CAS #007440-36-0 (SDMS ID: 363339)	2
12	05/20/10	Lam, S., & J. Justice, U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Request for a Time Critical Removal Action at the New Lyme Metals Site (PORTIONS OF THIS DOCUMENT HAVE BEEN REDACTED/ SDMS ID: 363345)	39

UPDATE #1
SEPTEMBER 2010

1	08/00/05	ATSDR	File	ToxFAQs for Zinc CAS #7440-66-6	2
2	07/27/10	EA Group	Environmental Restoration LLC	Laboratory Analytical Report for the New Lyme Metals Site (1007-00158)	65
3	07/30/10	EA Group	Environmental Restoration LLC	Laboratory Analytical Report for the New Lyme Metals Site (1007-00197)	136
4	08/02/10	EA Group	Environmental Restoration LLC	Laboratory Analytical Report for the New Lyme Metals Site (1007-00236)	125
5	00/00/00	Justice, J., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Request for Ceiling Increase, Exemption from the \$2 Million Statutory Limit, Redefine the Site Description and Scope of Work for a Time-Critical Removal Action at the New Lyme Metals Site (PENDING)	

ATTACHMENT II

**DETAILED CLEANUP CONTRACTOR ESTIMATE
NEW LYME METALS SITE
NEW LYME TOWNSHIP, ASHTABULA COUNTY, OHIO
SEPTEMBER 2010**

The estimated cleanup contractor costs necessary to complete the removal action at the New Lyme Metals Site are as follows:

Personnel	\$	412,724
Equipment	\$	246,190
<u>Transportation and Disposal</u>	\$	<u>1,371,480</u>
TOTAL ERRS	\$	2,030,394

ATTACHMENT III

INDEPENDENT GOVERNMENT COST ESTIMATE

**NEW LYME METALS SITE
NEW LYME TOWNSHIP, ASHTABULA COUNTY, OHIO**

SEPTEMBER 2010

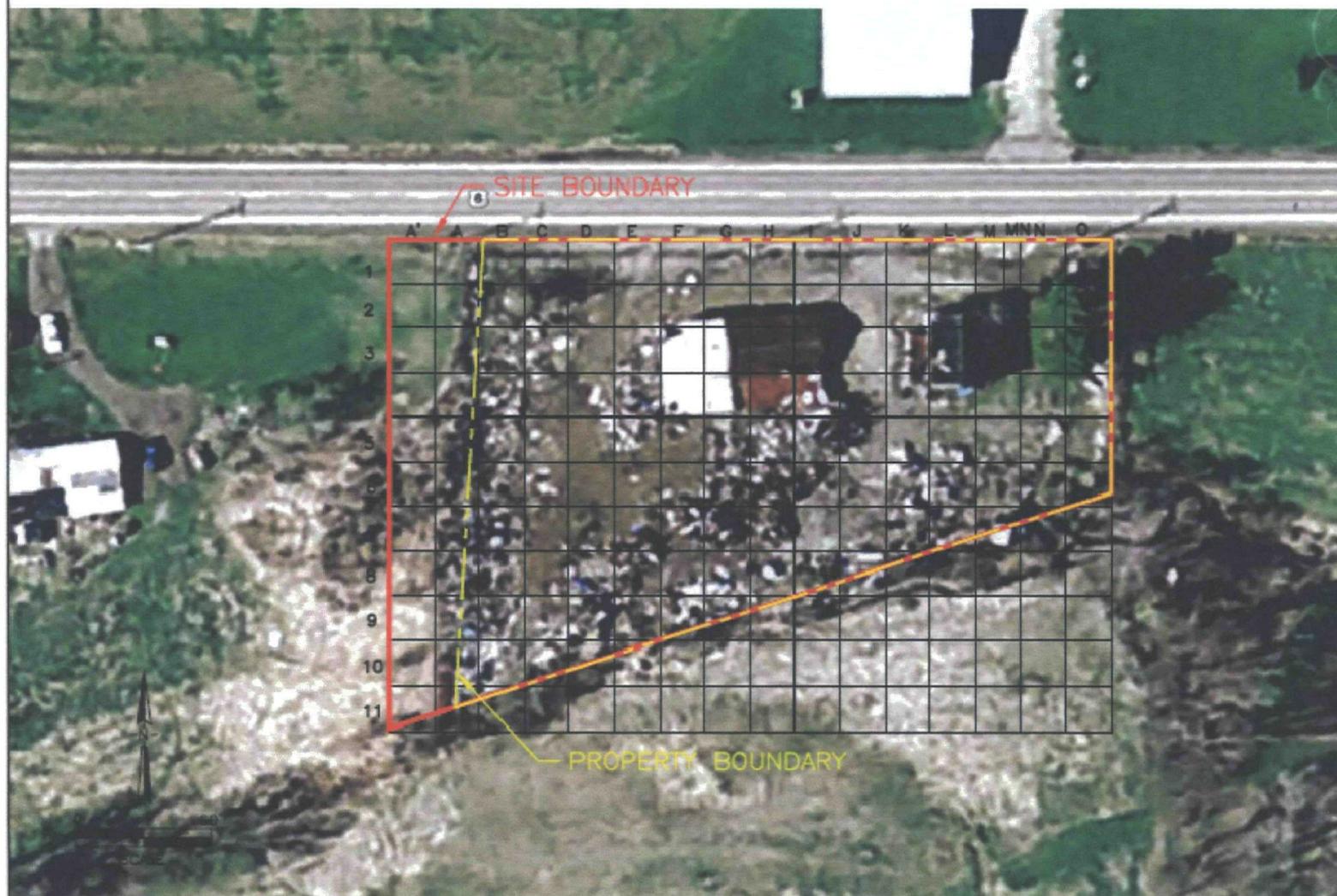
NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

(REDACTED 2 PAGES)

ATTACHMENT IV

**SITE FIGURE
NEW LYME METALS SITE
NEW LYME TOWNSHIP, ASHTABULA COUNTY, OHIO
SEPTEMBER 2010**

NEW LYME METALS SITE



ATTACHMENT V

**SUMMARY DATA TABLE
NEW LYME METALS SITE
NEW LYME TOWNSHIP, ASHTABULA COUNTY, OHIO
SEPTEMBER 2010**

	Parameter	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268
	Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Regulatory Limit	5.00	100.00	1.00	5.00	5.00	0.20	1.00	5.00								
Sample Number	Depth																
A1-S1	0-3 ft	<0.50	2.58	<0.50	<0.50	2.61	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	0.43	<0.11
A2-S1	0-3 ft	<0.50	4.28	<0.50	<0.50	12.3	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	0.078 J	<0.12	<0.12
A3-S1	0-3 ft	<0.50	1.4	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.14	<0.14	<0.14	<0.14	<0.14	0.25	<0.14	<0.14
B1-S1	0-3 ft	<0.10	1.95	0.240	<0.10	1.90	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	<0.12	1.1	<0.12	<0.12	<0.12
B1-S2	3-6 ft	<0.10	0.198	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
B2-S1	0-3 ft	<0.10	3.88	0.327	<0.10	2.72	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	<0.12	<0.12	1.1	<0.12	<0.12
B3-S1	0-3 ft	<0.10	0.572	<0.10	<0.10	0.502	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
B4-S1	0-3 ft	<0.10	1.69	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	<0.12	<0.12	0.73	<0.12	<0.12
B4-S2	3-6 ft	<0.10	1.58	<0.10	<0.10	1.34	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	0.29	<0.13	<0.13
B5-S1	0-3 ft	<0.10	1.68	0.376	<0.10	<0.10	<0.0050	<0.10	<0.10	<1.6	<1.6	<1.6	19	<1.6	<1.6	<1.6	<1.6
B6-S1	0-3 ft	<0.10	2.03	0.884	<0.10	0.106	<0.0050	<0.10	<0.10	<1.8	<1.8	<1.8	20	<1.8	<1.8	<1.8	<1.8
B7-S1	0-3 ft	<0.10	1.25	0.559	<0.10	0.412	<0.0050	<0.10	<0.10	<160	<160	<160	2,100	<160	<160	<160	<160
B8-S1	0-3 ft	<0.10	1.43	0.654	<0.10	0.211	<0.0050	<0.10	<0.10	<20	<20	<20	<20	<20	220	<20	<20
B9-S1	0-3 ft	<0.10	1.13	0.197	<0.10	0.179	<0.0050	<0.10	<0.10	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
B10-S1	0-3 ft	<0.10	1.83	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	<0.12	<0.12	0.11 J	<0.12	<0.12
C1-S1	0-3 ft	<0.10	0.461	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	0.16	<0.13
C2-S1	0-3 ft	<0.10	2.29	<0.10	<0.10	0.747	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	0.82	<0.13	<0.13	0.39	<0.13
C3-S1	0-3 ft	<0.10	0.552	0.160	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	0.088 J	<0.13	<0.13
C4-S1	0-3 ft	<0.10	1.65	0.508	<0.10	2.55	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	<0.12	<0.12	5.2	<0.12	<0.12
C5-S1	0-3 ft	<0.10	0.755	0.119	<0.10	0.645	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	0.19	<0.13	<0.13	<0.13	<0.13
C6-S1	0-3 ft	<0.10	1.59	0.19	<0.10	2.19	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	1.3	<0.13	<0.13	<0.13	<0.13
C7-S1	0-3 ft	<0.10	1.80	1.42	<0.10	1.42	<0.0050	<0.10	<0.10	<1.2	<1.2	<1.2	47	<1.2	<1.2	<1.2	<1.2
C7-S2	3-6 ft	<0.10	0.705	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.11	<0.11	<0.11	<0.11	<0.11	0.53	<0.11	<0.11
C8-S1	0-3 ft	<0.10	1.14	0.234	<0.10	<0.10	<0.0050	<0.10	<0.10	<1.2	<1.2	<1.2	<1.2	<1.2	37	<1.2	<1.2
C8-S2	3-6 ft	<0.10	1.27	0.630	<0.10	<0.10	<0.0050	<0.10	<0.10	<13	<13	<13	<13	<13	260	<13	<13
C8-S3	6-9 ft	<0.10	2.00	0.137	<0.10	0.686	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	4.7	<0.13	<0.13
C9-S1	0-3 ft	<0.10	3.30	2.60	<0.10	6.66	<0.0050	<0.10	<0.10	<190	<190	<190	1,500	<190	<190	<190	<190

	Parameter	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268
	Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/kg							
	Regulatory Limit	5.00	100.00	1.00	5.00	5.00	0.20	1.00	5.00								
Sample Number	Depth																
C10-S1	0-3 ft	<0.10	3.52	2.18	0.278	7.13	<0.0050	0.216	0.262	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
C10-S2	3-6 ft	<0.10	<0.10	0.680	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	1.4	<0.13	<0.13
D1-S1	0-3 ft	<0.10	0.245	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
D2-S1	0-3 ft	<0.10	0.729	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
D3-S1	0-3 ft	<0.10	1.68	0.667	<0.10	0.574	<0.0050	<0.10	<0.10	<1.2	<1.2	<1.2	<1.2	<1.2	11	<1.2	<1.2
D3-S2	3-6 ft	<0.10	0.724	<0.10	<0.10	1.09	<0.0050	<0.10	<0.10	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
D4-S1	0-3 ft	<0.10	2.71	0.87	<0.10	0.107	<0.0050	<0.10	<0.10	<1.2	<1.2	31	<1.2	<1.2	<1.2	<1.2	<1.2
D4-S2	3-6 ft	<0.10	3.63	<0.10	<0.10	0.125	<0.0050	<0.10	<0.10	<1.4	<1.4	<1.4	10	<1.4	<1.4	<1.4	<1.4
D4-S3	6-9 ft	<0.10	0.129	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
D5-S1	0-3 ft	<0.10	1.72	0.179	<0.10	<0.10	<0.0050	<0.10	<0.10	<1.1	<1.1	<1.1	44	<1.1	<1.1	<1.1	<1.1
D5-S2	3-6 ft	<0.10	0.271	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	1.2	<0.12	<0.12	<0.12	<0.12
D6-S1	0-3 ft	<0.10	3.92	1.87	<0.10	0.116	<0.0050	<0.10	<0.10	<13	<13	<13	200	<13	<13	<13	<13
D6-S2	3-6 ft	<0.10	3.61	0.871	<0.10	<0.10	<0.0050	<0.10	<0.10	<1.2	<1.2	<1.2	35	<1.2	<1.2	<1.2	<1.2
D6-S3	6-9 ft	<0.10	0.181	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.11	<0.11	<0.11	3.4	<0.11	<0.11	<0.11	<0.11
D7-S1	0-3 ft	<0.10	2.05	0.611	<0.10	<0.10	<0.0050	<0.10	<0.10	<1.2	<1.2	<1.2	<1.2	<1.2	41	<1.2	<1.2
D7-S2	3-6 ft	<0.10	2.65	0.189	<0.10	<0.10	<0.0050	<0.10	<0.10	<12	<12	<12	160	<12	<12	<12	<12
D7-S3	6-9 ft	<0.10	0.656	<0.10	<0.10	0.174	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	2.9	<0.12	<0.12	<0.12	<0.12
D8-S1	0-3 ft	<0.10	1.1	0.118	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.14	<0.14	<0.14	<0.14	<0.14	2.4	<0.14	<0.14
D8-S2	3-6 ft	<0.10	0.752	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.11	<0.11	<0.11	<0.11	<0.11	0.43	<0.11	<0.11
D9-S1	0-3 ft	<0.10	0.508	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	0.89	<0.13	<0.13
E1-S1	0-3 ft	<0.50	1.47	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	2.3	<0.13	<0.13	<0.13	<0.13
E2-S1	0-3 ft	<0.10	1.12	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.13	<0.13	<0.13	<0.13	<0.13	0.39	<0.13	<0.13
E3-S1	0-3 ft	<0.50	0.732	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	0.70	<0.11	<0.11	<0.11	<0.11
E3-S2	3-6 ft	<0.50	<0.50	<0.50	<0.50	0.660	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	0.14	<0.12	<0.12	<0.12	<0.12
E4-S1	0-3 ft	<0.10	1.84	0.406	<0.10	<0.10	<0.0050	<0.10	<0.10	<1.4	<1.4	<1.4	33	<1.4	<1.4	<1.4	<1.4
E4-S2	3-6 ft	<0.10	0.283	<0.10	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.12	<0.12	<0.12	0.18	<0.12	<0.12	<0.12	<0.12
E5-S1	0-3 ft	<0.50	2.13	0.519	<0.50	<0.50	<0.0050	<0.50	<0.50	<1.6	<1.6	<1.6	29	<1.6	<1.6	<1.6	<1.6

	Parameter	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268
	Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/kg							
	Regulatory Limit	5.00	100.00	1.00	5.00	5.00	0.20	1.00	5.00								
Sample Number	Depth																
F9-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
G1-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	1.2	<0.11	<0.11
G2-S1	0-3 ft	<0.50	1.13	<0.50	<0.50	0.700	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	6.2	<0.11	<0.11
G3-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
G4-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	<0.13	<0.13	0.67	<0.13	<0.13
G4-S2	3-6 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
G5-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.27	<0.27	<0.27	<0.27	<0.27	6.4	<0.27	<0.27
G5-S2	3-6 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.20	<0.20	<0.20	0.39	<0.20	<0.20	<0.20	<0.20
G5-S3	6-9 ft	<0.50	0.510	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
G6-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.23	<0.23	<0.23	4.4	<0.23	<0.23	<0.23	<0.23
G7-S1	0-3 ft	<0.50	0.908	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<1.3	<1.3	<1.3	<1.3	<1.3	34	<1.3	<1.3
G7-S2	3-6 ft	<0.50	0.676	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<1.4	<1.4	<1.4	17	<1.4	<1.4	<1.4	<1.4
G8-S1	0-3 ft	<0.50	1.14	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	0.82	<0.13	<0.13	<0.13	<0.13
G8-S2	3-6 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
H1	Surface	<0.50	1.37	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	4.2	<0.11	<0.11
H5-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.27	<0.27	<0.27	<0.27	<0.27	6.6	<0.27	<0.27
H5-S2	3-6 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
H6-S1	0-3 ft	<0.50	3.03	0.516	<0.50	2.42	<0.0050	<0.50	<0.50	<14	<14	<14	210	<14	<14	<14	<14
H7-S1	0-3 ft	<0.50	4.19	1.09	<0.50	2.9	0.0085	<0.50	<0.50	<1.3	<1.3	<1.3	16	<1.3	<1.3	37	<1.3
H7-S2	3-6 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
H8-S1	0-3 ft	<0.50	0.839	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	<0.13	<0.13	1.5	<0.13	<0.13
I1	Surface	<0.50	1.60	<0.50	<0.50	7.60	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	0.48	<0.11	<0.11
I5-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
I7-S1	0-3 ft	<0.50	1.17	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<1.3	<1.3	<1.3	65	<1.3	<1.3	<1.3	<1.3
I7-S2	3-6 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	3.9	<0.13	<0.13	<0.13	<0.13
I8-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.14	<0.14	<0.14	0.77	<0.14	<0.14	<0.14	<0.14
J1	Surface	<0.50	1.27	<0.50	<0.50	2.95	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	1.6	<0.11	<0.11

	Parameter	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268
	Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	Regulatory Limit	5.00	100.00	1.00	5.00	5.00	0.20	1.00	5.00								
Sample Number	Depth																
J2	Surface	<0.50	1.71	<i>1.11</i>	<0.50	14.3	<0.0050	<0.50	<0.50	<1.1	<1.1	<1.1	<1.1	14	<1.1	<1.1	<1.1
J3	Surface	<0.50	<0.50	0.507	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	0.97	<0.12	<0.12	<0.12
J5-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	0.20	<0.12	<0.12	<0.12	<0.12
J6-S1	0-3 ft	<0.50	5.61	0.713	<0.50	2.47	<0.0050	<0.50	<0.50	<1.4	<1.4	<1.4	<1.4	<1.4	26	<1.4	<1.4
J6-S2	3-6 ft	<0.50	0.590	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.16	<0.16	<0.16	<0.16	<0.16	0.70	<0.16	<0.16
J7-S1	0-3 ft	<0.50	2.32	0.544	<0.50	1.21	<0.0050	<0.50	<0.50	<1.3	<1.3	<1.3	36	<1.3	<1.3	<1.3	<1.3
J7-S2A	3-6 ft	<0.50	0.788	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<1.4	<1.4	<1.4	38	<1.4	<1.4	<1.4	<1.4
J7-S2B	3-6 ft	<0.50	0.793	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<1.6	<1.6	<1.6	48	<1.6	<1.6	<1.6	<1.6
J7-S3	6-9 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.15	<0.15	<0.15	0.15	<0.15	<0.15	<0.15	<0.15
J8-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<1.4	<1.4	<1.4	26	<1.4	<1.4	<1.4	<1.4
K1	Surface	<0.50	0.659	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	0.30	<0.11	<0.11
K2	Surface	<0.50	0.654	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
K3	Surface	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
K4-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
K5-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	0.082 J	<0.12	<0.12	<0.12
K6-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.14	<0.14	<0.14	1.9	<0.14	<0.14	<0.14	<0.14
K6-S2	3-6 ft	<0.50	0.764	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
K7-S1	0-3 ft	<0.50	0.612	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<15	<15	<15	530	<15	<15	<15	<15
K8-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	<0.13	1.9	<0.13	<0.13	<0.13
L1-S1	0-3 ft	<0.50	0.676	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
L4-S1	0-3 ft	<0.50	0.689	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	1.1	<0.11	<0.11	<0.11
L5-S1	0-3 ft	<0.50	0.724	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
L6-S1	0-3 ft	<0.50	0.507	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.14	<0.14	<0.14	<0.14	1.7	<0.14	<0.14	<0.14
L7-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
L8-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.15	<0.15	<0.15	0.47	<0.15	<0.15	<0.15	<0.15
M4-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
M5-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	0.075 J	<0.12	<0.12

	Parameter	TCLP Arsenic	TCLP Barium	TCLP Cadmium	TCLP Chromium	TCLP Lead	TCLP Mercury	TCLP Selenium	TCLP Silver	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268
	Units	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/kg							
	Regulatory Limit	5.00	100.00	1.00	5.00	5.00	0.20	1.00	5.00								
Sample Number	Depth																
M6-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
M7-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
MN1-S1	0-3 ft	<0.50	0.604	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
MN2-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
MN3-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
N4-S1	0-3 ft	<0.50	0.763	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
N5-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	<0.12	<0.12	0.15	<0.12	<0.12
N6-S1	0-3 ft	<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.12	<0.12	<0.12	1.2	<0.12	<0.12	<0.12	<0.12
N7-S1	0-3 ft	<0.50	1.11	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
SED 0		<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.17	<0.17	<0.17	<0.17	<0.17	0.64	<0.17	<0.17
SED 1		<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
SED 3		<0.50	<0.50	<0.50	<0.50	<0.50	<0.0050	<0.50	<0.50	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
PB-W1										<2.0	<2.0	<2.0	<2.0	<2.0	26	<2.0	<2.0
PB-W2										<2.0	<2.0	<2.0	<2.0	<2.0	4.9	<2.0	<2.0

Bold = Detection

Red/Italics = Above Regulatory Limit. (Note the TSCA Regulatory limit for PCBs is 50 mg/kg total PCBs not individual Aroclor's)

ATTACHMENT VI

**ORIGINAL ACTION MEMORANDUM
NEW LYME METALS SITE
NEW LYME TOWNSHIP, ASHTABULA COUNTY, OHIO
SEPTEMBER 2010**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
EMERGENCY RESPONSE BRANCH 1
25089 CENTER RIDGE ROAD
WESTLAKE, OH 44145

MAY 20 2010

MEMORANDUM

SUBJECT: ACTION MEMORANDUM - Request for a Time-Critical Removal Action at the New Lyme Metals Site, Jefferson, Ashtabula County, Ohio (Site ID #B5VC)

FROM: Shelly Lam, On-Scene Coordinator
Emergency Response Branch 1/Response Section 1

James Justice, On-Scene Coordinator
Emergency Response Branch 1/Response Section 1

THRU: Jason H. El-Zein, Chief
Emergency Response Branch 1

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

The purpose of this memorandum is to request and document your approval to expend up to \$123,972 to conduct a time-critical removal action at the New Lyme Metals Site in Jefferson, Ohio (the New Lyme Site or the Site). Emergency Response Branch (ERB) 1 Chief Jason H. El-Zein verbally authorized funding of \$10,000 on March 2, 2010, to install a gate and fence to prevent trespassing. The response actions proposed herein are necessary in order to mitigate threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances at the Site, an abandoned residential property formerly operated as an electronics scrap yard. The presence of hazardous substances existing at the Site has been documented, including toxic wastestreams.

The removal action proposed herein is to complete the following: conduct characterization sampling to determine if wastes can be segregated to minimize the volume of mixed waste transported off-site; conduct a treatability study to determine if leachable metals can be treated prior to off-site disposal; characterize and dispose of containerized wastes that are present on site; assess options for additional removal activities and disposal options and prepare associated cost estimates; and take any other response actions necessary to address any release or threatened release of a hazardous substance, pollutant or contaminant that the EPA On-Scene Coordinators (OSCs) determines may pose an imminent and substantial endangerment. The

costs for additional removal actions will be documented in an amendment to this action memorandum. This response action will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC § 9604(a)(1), to abate or eliminate the immediate threat posed to public health and/or the environment by the presence of the hazardous substances at the Site. The uncontrolled conditions of the hazardous substances present at the Site require that this action be classified as a time-critical removal action. This initial removal action will require approximately 10 working days to complete.

There are no nationally significant or precedent setting issues associated with the Site. The Site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID # OHN000510416

A. Physical Location and Description

The New Lyme Metals Site is located at 618 State Route 6 in Jefferson, New Lyme Township, Ashtabula County, Ohio, 44047 (see Figure A-1). The geographical coordinates for the Site are Latitude 41.604995° North and Longitude 80.764439° West. The Site is comprised of three parcels, totaling approximately 1 acre in size, and contains a dilapidated house and garage/barn. The Site is located in a rural area of New Lyme Township. Approximately 150 people live within 1 mile of the Site. Residences are located approximately 200 feet from the north and west property boundaries.

During a Site visit on December 9, 2009, and a Site Assessment on February 18, 2010, U.S. EPA OSCs documented uncontained waste scattered across the Site including electronics components, circuit boards, capacitors, tires, compressed gas cylinders, and numerous drums (see Figure A-3, Photos 1-3). Approximately twenty 55-gallon drums containing unknown contents were documented inside the garage (Photo 4). The OSCs also observed heavily stained soil and evidence of burning. The Site is currently vacant. However, the OSCs documented evidence of trespassing, including graffiti inside the garage and fresh footprints in the snow (Photos 5 and 6).

The area surrounding the New Lyme Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)): Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The New Lyme Site is in a census tract with a score of 8 (Attachment A). Therefore, Region 5 does not consider this Site to be a high-priority potential EJ area of concern. Please refer to the attached analysis for additional information.

B. Site Background - Ohio Environmental Protection Agency

On April 28, 2004, the Ohio Environmental Protection Agency (Ohio EPA) and U.S. EPA conducted a visit to the Site based on the presence of a mineral oil odor. On September 28, 2004, Ohio EPA and U.S. EPA collected soil and sediment samples at the Site for polychlorinated biphenyl (PCB) analysis. Sample results indicated that Aroclors 1242 and 1254 exceeded 50 parts per million (ppm) in one sample. Ohio EPA and U.S. EPA collected additional samples on November 23, 2004. Several samples contained PCBs over 50 ppm (U.S. EPA, 2005). Data was forwarded to Ohio EPA for enforcement actions.

On September 9, 2009, Ohio EPA referred the Site to U.S. EPA because of failed enforcement efforts and continued complaints received from New Lyme Trustees and a downstream community. In addition, Ohio EPA's attempts to locate a responsible party were unsuccessful.

Ohio EPA, a trustee from New Lyme Township, and U.S. EPA conducted a visit to the Site on December 9, 2009, to document Site conditions. During the Site visit, the OSCs documented uncontained waste scattered across the Site including electronics components, circuit boards, capacitors, tires, compressed gas cylinders, and numerous drums. Approximately twenty 55-gallon drums containing unknown contents were documented inside the garage. The OSCs also observed heavily-stained soil and evidence of burning.

On February 18, 2010, U.S. EPA and START performed a Site Assessment including sample collection. Activities performed during the Site Assessment included:

- Documented Site conditions;
- Conducted air monitoring
- Conducted soil monitoring using an x-ray fluorescence (XRF) detector; and
- Collected samples from drums, soil, sediment, and circuit boards.

U.S. EPA Site Assessment sampling results are found in Tables B-1 through B-4. These results indicated that there are total PCB concentrations above 50 parts per million (definition of TSCA wastes), concentrations of leachable cadmium above the 1 milligrams per liter regulatory limit and total metals concentrations above direct contact standards for antimony, arsenic, cadmium, lead and mercury.

In March 2010, U.S. EPA utilized the Emergency Rapid Response Services (ERRS) contractor installed a gate and fence at the Site to prevent trespassing. The OSCs documented evidence of recent trespassing during the Site Assessment.

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

The conditions present at the New Lyme Site present an imminent and substantial threat to the public health, or welfare, and the environment based upon the factors set forth in Section

300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), as amended, 40 CFR Part 300. These factors include, but are not limited to, the following:

1) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

During the December 9, 2009, Site visit and February 18, 2010, Site Assessment, the OSCs documented uncontained waste scattered across the Site including electronics components, circuit boards, capacitors, tires, compressed gas cylinders, and numerous drums. The OSCs also observed heavily stained soil and evidence of burning.

The Site Assessment involved sampling surface soil, the content in drums and suspected asbestos containing material on the Site, and sediment from the creek that runs next to the Site. Analytical results from the Site Assessment indicated the presence of elevated concentrations of hazardous substances, as defined by section 101(14) of CERCLA.

Six surface soil samples collected contained PCBs and metals including Arsenic, Lead, Cadmium, Antimony, and Mercury at concentrations exceeding the Ohio Administrative Code (OAC) 3745-300-08 Residential Land Use Category Generic Direct Contact Standard for the Single Chemical criteria. Four bulk samples contained more than 1 percent asbestos, which is the regulatory limit defined at 40 CFR 61.141. The above are hazardous substances, as defined by section 101(14) of CERCLA. Analytical results are provided in Tables B1-B4 and are summarized below.

Residential and agricultural areas are located approximately 200 feet from the Site. During the December 9, 2010, U.S. EPA Site Visit, the OSCs documented that the Site was abandoned and that trespassing had occurred. Direct contact with hazardous substances is possible. The close proximity of residential and agricultural areas adjacent to the Site greatly increases the likelihood of exposure to human populations, animals, and the food chain. Additionally, a perennial stream (Photo 7) adjoins the Site to the south, increasing exposure to animals and the food chain. Potential exposure could occur through each of these migration pathways and cause imminent endangerment to human health and the environment. Exposure pathways include direct contact and ingestion associated with uncontrolled hazardous waste in and around the Site.

Arsenic results ranged from non-detect to 28.5 milligrams per kilogram (mg/kg), and exceeded the OAC action level of 6.7 mg/kg in seven of the eight soil samples collected. The Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQ indicates that breathing high levels of inorganic arsenic can cause sore throat or irritated lungs. Ingesting very high levels of arsenic can result in death. Exposure to lower levels 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. 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 (ATSDR, 2007).

Lead concentrations detected at the Site ranged from 14.4 to 2,020 mg/kg, and exceeded the OAC action level of 400 mg/kg in six of the eight samples. According to the ATSDR ToxFAQ, lead can affect almost every organ and system in your 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 (ATSDR, 2007b).

Concentrations of cadmium detected in Site soil samples ranged from 0.48 to 438 mg/kg. Four samples exceeded the OAC action level of 72 mg/kg. In addition, surface soil sample NLM-S03-021810 contained TCLP Cadmium at 6.2 micrograms per liter (mg/L), which exceeds the Toxicity Characteristic Leaching Procedure (TCLP) regulatory limit of 1.0 mg/L outlined at 40 CFR 261.24. According to ATSDR, 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. DHHS has determined that cadmium and cadmium compounds are known human carcinogens (ATSDR, 2008).

Antimony concentrations detected in Site soils ranged from non-detect to 52.6 mg/kg, with two samples exceeding the OAC action level of 30 mg/kg. Exposure to antimony at high levels can result in a variety of adverse health effects. Breathing high levels for a long time can irritate your eyes and lungs and can cause heart and lung problems, stomach pain, diarrhea, vomiting, and stomach ulcers. In short-term studies, animals that breathed very high levels of antimony died. Animals that breathed high levels had lung, heart, liver, and kidney damage. In long-term studies, animals that breathed very low levels of antimony had eye irritation, hair loss, lung damage, and heart problems. Problems with fertility were also noted. In animal studies, problems with fertility have been seen when rats breathed very high levels of antimony for a few months. Ingesting large doses of antimony can cause vomiting. Long-term animal studies have reported liver damage and blood changes when animals ingested antimony. Antimony can irritate the skin if contact is prolonged (ATSDR, 1995).

Mercury concentrations detected in Site soil ranged from 0.055 to 136 mg/kg, with five samples exceeding the OAC action level of 7.6 mg/kg. According to ATSDR,

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 brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems. 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 (ATSDR, 1999).

Four of the nine surface soil samples collected exceeded the PCB action levels of 25 mg/kg established in 40 CFR 761.61(a)(4)(i)(B). Aroclors 1242 and 1254 were detected in these samples at a maximum concentration of 110 mg/kg. According to the ToxFAQ, 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 EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans (ATSDR, 2001).

Four bulk samples contained more than 1 percent asbestos, which is the regulatory limit defined at 40 CFR 61.141. According to the ATSDR ToxFAQ, asbestos mainly affects the lungs and the membrane that surrounds the lungs. Breathing high levels of asbestos fibers for a long time may result in scar-like tissue in the lungs and in the pleural membrane (lining) that surrounds the lung. This disease is called asbestosis and is usually found in workers exposed to asbestos, but not in the general public. People with asbestosis have difficulty breathing, often a cough, and in severe cases heart enlargement. Asbestosis is a serious disease and can eventually lead to disability and death. Breathing lower levels of asbestos may result in changes called plaques in the pleural membranes. Pleural plaques can occur in workers and sometimes in people living in areas with high environmental levels of asbestos. Effects on breathing from pleural plaques alone are not usually serious, but higher exposure can lead to a thickening of the pleural membrane that may restrict breathing. DHHS, the World Health Organization (WHO), and the EPA have determined that asbestos is a human carcinogen (ATSDR, 2001b).

2) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

Approximately 150 people live within 1 mile of the Site. These residents obtain drinking water from private drinking water wells. There is the potential for

contamination of the drinking water supply from PCBs and leachable metals migrating from the Site into area groundwater.

3) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

During the December 9, 2009, Site visit and February 18, 2010, U.S. EPA Site Assessment, the OSCs documented drums and unknown cylinders across the Site. Approximately twenty 55-gallon drums containing unknown contents were located inside the garage. One of the drums was observed to be leaking and has released its contents to the environment (Photo 8). EPA returned to the Site on February 19, 2010, to assist the Ohio EPA in overpacking the drum. Samples collected from the drums inside the garage did not meet criteria for ignitability and corrosivity per 40 CFR 261.21 and 261.22. Analytical results for PCBs from the drums are provided in Tables B-3. These samples did not exceed the criteria established in 40 CFR 761.3. However, multiple 55-gallon drums were observed in a partially-buried bus on the southwest corner of the Site and in the basement of the on-site residential house. These drums were not sampled during the Site Assessment because the drums could not be accessed and the house appeared to be structurally unsound. The contents of these remaining drums are unknown.

4) High levels of hazardous substances or pollutants or contaminants in soils at or near the surface, that may migrate;

Analytical results from the Site Assessment document the presence of high levels of hazardous substances in soils at or near the surface. Total metals were detected in multiple samples at concentrations exceeding the OAC criteria include Arsenic, Lead, Cadmium, Antimony and Mercury. Four of the nine surface soil samples collected exceeded the PCB action criteria at 40 CFR 761.61(a)(4)(i)(B). Arsenic concentrations in the downstream sediment sample from the adjoining stream (Sample # NLM-SED01-021810) may indicate that arsenic is migrating from the Site. In one sample (Sample # NLM-S03-021810) cadmium exceeded the regulatory limit for TCLP, indicating the potential for cadmium to leach from site soils.

5) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

An unnamed tributary to Whetstone Creek flows east to west along the southern Site boundary. Whetstone Creek flows into Rock Creek approximately 2.5 miles southeast of the Site. Northeast Ohio receives a substantial amount of precipitation during spring, and winter temperatures are normally below freezing with regular snowfall. During the Site Assessment, the OSCs documented that the majority of waste material was stored outside in uncovered and uncontained conditions. Sample results from the Site Assessment indicate hazardous substances are present in surface soils on Site. Samples of the sediments from the unnamed tributary indicate the creek is impacted by

heavy metals and PCBs. Weather conditions could contribute to an increased risk of migration of contaminants into the unnamed tributary.

6) The availability of other appropriate Federal or State response mechanisms to respond to the release;

In a letter dated September 9, 2009, Ohio EPA requested assistance from U.S. EPA in conducting a potential time-critical removal action involving uncontrolled hazardous waste at the Site.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the known and suspected hazardous substances on Site, and the potential exposure pathways described in Sections II and III, actual or threatened releases of hazardous substances from this 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.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

Analytical results from the Site Assessment indicated that the waste materials on-site may present a mixed waste of PCBs and leachable metals. If the waste is disposed off-site as a mixed waste it would have to be taken to a RCRA hazardous waste landfill that accepts PCBs and disposal costs will be approximately \$220/ton and could exceed \$3,000,000. If materials containing leachable metals can be separated from the PCBs, and PCB containing material can be further segregated into TSCA PCBs (>50 ppm) from non-TSCA PCBs, the metals can be treated and the non-PCB waste sent to a RCRA Subtitle D solid waste landfill near the Site at a significant cost savings. As such, the OSCs propose conducting a phased approach to the removal actions to minimize costs. The OSCs propose to undertake the following response actions to mitigate threats posed by the presence of hazardous substances at the New Lyme Metals Site:

1. Develop and implement a Site-specific Health and Safety Plan, including an Air Monitoring Plan, and a Site Emergency Contingency Plan;
2. Conduct characterization sampling to determine if wastes can be segregated to minimize the volume of mixed waste transported off-site for disposal at a hazardous waste landfill. The OSCs and Emergency and Rapid Response Services (ERRS) contractor will dig test trenches across the Site and collect samples from various depths within each test trench;
3. Conduct a treatability study to determine if leachable metals can be treated prior to off-site disposal;
4. Inventory and perform hazard characterization on substances contained in cylinders and drums;

5. Consolidate and package hazardous substances, pollutants and contaminants contained in cylinders and drums for transportation and off-site disposal to a RCRA/CERCLA-approved disposal facility in accordance with U.S. EPA's Off-Site Rule (40 CFR § 300.440);
6. Transport and dispose off-site any hazardous substances, pollutants and contaminants at a RCRA/CERCLA-approved disposal facility in accordance with U.S. EPA's Off-Site Rule (40 CFR § 300.440);
7. Take any other response actions to address any release or threatened release of a hazardous substance, pollutant or contaminant that the EPA OSC determines may pose an imminent and substantial endangerment to the public health or the environment.

Following the completion of these proposed actions, the OSCs will prepare a second Action Memorandum detailing costs for any additional removal, transportation and disposal activities associated with the Site soils.

The removal actions will be conducted in a manner not inconsistent with the NCP. The OSC has initiated planning for provision of post-removal Site control consistent with the provisions of Section 300.415(l) of the NCP.

The threats posed by uncontrolled substances considered hazardous meet the criteria listed in Section 300.415(b)(2) of the NCP, and the response actions proposed herein are consistent with any long-term remedial actions which may be required. Elimination of hazardous substances, pollutants and contaminants that pose a substantial threat of release is expected to minimize substantial requirements for post-removal Site controls.

The estimated costs to complete the activities outlined above are summarized on the next page. These activities will require an estimated 10 on-site working days to complete.

Detailed cleanup contractor costs are presented in Attachment 1.

REMOVAL PROJECT CEILING ESTIMATE

EXTRAMURAL COSTS:

<u>Regional Removal Allowance Costs:</u>	
Total Cleanup Contractor Costs (Includes a 20% contingency)	\$85,832
<u>Other Extramural Costs Not Funded from the Regional Allowance</u>	
Total START, including multiplier costs	\$21,970
Subtotal, Extramural Costs	\$107,802
Extramural Costs Contingency (15% of Subtotal, Extramural Costs)	\$16,170
TOTAL REMOVAL ACTION PROJECT CEILING	\$123,972

The response actions described in this memorandum directly address the actual or threatened release of hazardous substances, pollutants, or contaminants at the Site which may pose an imminent and substantial endangerment to public health or welfare or to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

Applicable or Relevant and Appropriate Requirements

All applicable and relevant and appropriate requirements (ARARs) of Federal and State law will be complied with to the extent practicable. The OSCs sent a letter on March 4, 2010, to Kurt Kollar at Ohio EPA requesting the identification of any applicable State ARARs. Any State ARARs identified in a timely manner will be complied with to the extent practicable. The OSCs are currently using action levels set forth in Ohio Administrative Code 3745-300-08 Residential Land Use Category, Generic Direct Contact Standard for a Single Chemical, unless otherwise specified.

All hazardous substances, pollutants or contaminants removed off-site pursuant to this removal action for treatment, storage and disposal shall be treated, stored, or disposed at a facility in compliance, as determined by U.S. EPA, with the U.S. EPA Off-Site Rule, 40 CFR § 300.440.

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

Delayed or no action will result in increased potential of the toxic and hazardous substances to release, thereby threatening the environment and the health and welfare of nearby residents and other persons who are in proximity to the Site.

VII. OUTSTANDING POLICY ISSUES

None

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

The total EPA costs of this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$240,867.¹

$$(\$123,972 + \$25,024) + (61.66\% \times \$148,996) = \$240,867$$

IX. RECOMMENDATION

This decision document represents the selected removal action for the New Lyme Metals Site located in Jefferson, New Lyme Township, Ashtabula County, Ohio. This document has been 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 (see Attachment II).

Conditions at the Site meet the NCP § 300.415(b)(2) criteria for a time-critical removal action. The total project ceiling, if approved, will be \$123,972. Of this, as much as \$102,002 comes from the Regional removal allowance. You may indicate your decision by signing below.

APPROVE: Richard C. Ke DATE: 5-20-10
Director, Superfund Division

DISAPPROVE: _____ DATE: _____
Director, Superfund Division

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 direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgement 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.

Enforcement Addendum

Figures:

- A-1 Site Location Map
- A-2 Sampling Locations Map
- A-3 Photo Log

Tables:

- B-1 Laboratory Analytical Results for Total Metals
- B-2 Laboratory Analytical Results for TCLP Metals
- B-3 Laboratory Analytical Results for PCBs
- B-4 Laboratory Analytical Results for Asbestos

Attachments:

- I. Detailed Cleanup Contractor Cost Estimate
- II. Administrative Record Index
- III. Region V EJ Analysis
- IV. Independent Government Cost Estimate

cc: David Chung, U.S. EPA, 5203-G Chung.David@epa.gov
Michael Chezik, U.S. DOI, w/o Enf. Addendum Michael_Chezik@ios.doi.gov
Kurt Kollar, Ohio EPA w/o Enf. Addendum Kevin.Clouse@epa.state.oh.us
Richard Cordray, Ohio Attorney General, w/o Enf. Addendum
Dale.Vitale@ohioattorneygeneral.gov

ENFORCEMENT CONFIDENTIAL ADDENDUM

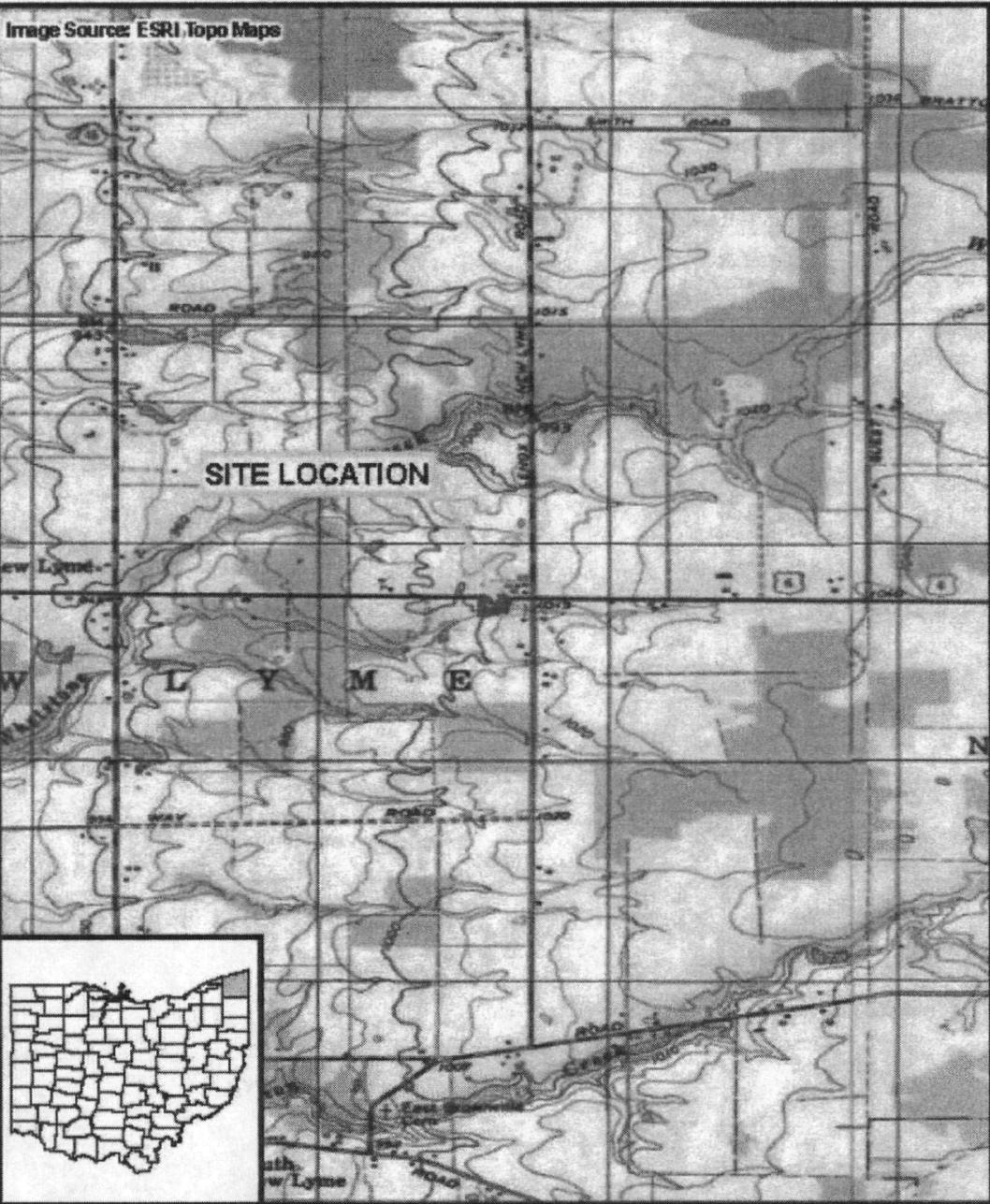
**MEW LYME METALS SITE
618 US HIGHWAY 6E, NEW LYME, ASHTABULA COUNTY, OHIO**

MAY 2010

(REDACTED 3 PAGES)

**ENFORCEMENT CONFIDENTIAL
NOT SUBJECT TO DISCOVERY**

FIGURE A-1
SITE LOCATION MAP



file: D:\new_lyme_metal\mst\NY_1_Site_Location.mxd, 12-Mar-10 10:16, wdot\stcn



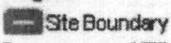
<p>Legend</p> <p> Site Boundary</p> <p>0 2,000 Feet</p> <p></p>	<p> Prepared for: U.S. EPA REGION V</p> <p>Contract No.: EP-65-05-04 TDD: S05-0001-1001-020 DCN: 921-2A-AGGY</p>	<p> Prepared By: WESTON SOLUTIONS, INC</p> <p>6779 Eagle Road Building 2, Suite 1 Middleburg Hts, Ohio 44130</p>	<p>Figure 1 Site Location Map New Lyme Metals Site Assessment New Lyme, Ashtabula County, Ohio</p>
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FIGURE A-2

SAMPLING LOCATIONS MAP

FIGURE A-3

PHOTO LOG



Photo 1: Waste at New Lyme Metals Site



Photo 2: View of waste drums and cylinders



Photo 3: Capacitors



Photo 4: Drums inside of garage

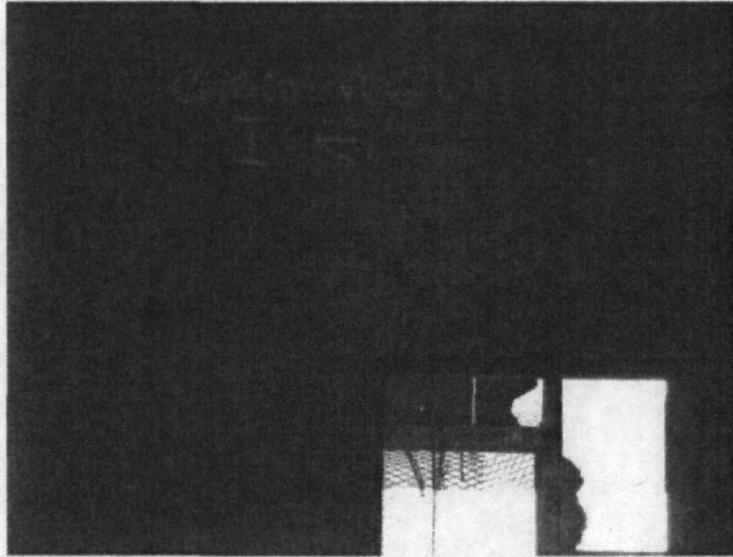


Photo 5: Graffiti inside of garage indicating trespassing



Photo 6: Fresh footprints in snow indicating trespassing



Photo 7: Stream that adjoins Site to south

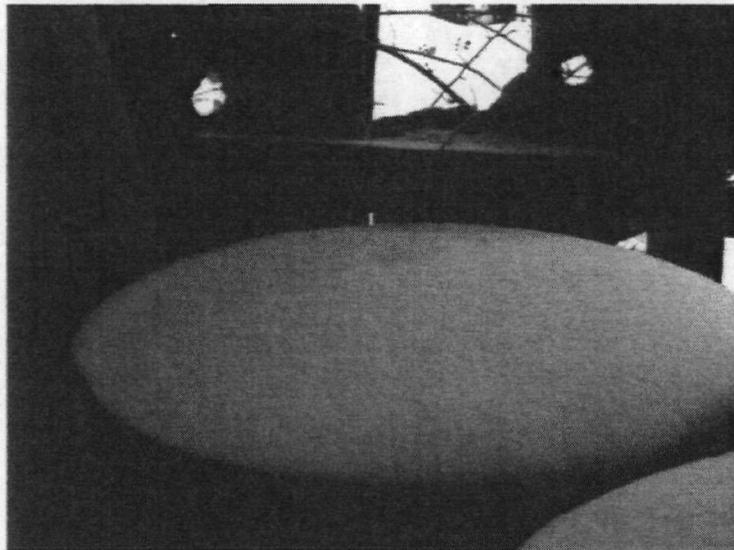


Photo 8: Leaking drum

TABLE B-1

LABORATORY ANALYTICAL RESULTS FOR TOTAL METALS

**TABLE B-1
LABORATORY ANALYTICAL RESULTS FOR TOTAL METALS
NEW LYME METALS SITE**

Analyte	Action Level (mg/kg)	Sample # NLM-S02-021810		Sample # NLM-S03-021810		Sample # NLM-S06-021810		Sample # NLM-S08-021810	
		Results (mg/kg)	Reporting Limit (mg/kg)						
Arsenic (As)	6.7	15.7 B, G	23.2	17.3 B, G	26.3	19.8 B, G	24.0	18.5 B, G	24.8
Lead (Pb)	400	1,540	7.0	2,020	7.9	1,920	7.2	2,020	7.4
Selenium (Se)	380	ND G	11.6	373	13.1	52.7	12.0	ND G	12.4
Thallium (Th)	6.1	ND G	23.2	ND G	26.3	ND G	24.0	ND G	24.8
Silver (Ag)	380	20.6 B, G	23.2	63.9	1.3	21.3	1.2	22.9	1.2
Aluminum (Al)	NA	14,000	23.2	50,300	26.3	22,400	24.0	6,760	24.8
Barium (Ba)	15,000	314	23.2	599	26.3	488	24.0	448	24.8
Beryllium (Be)	150	ND G	0.58	0.084 B	0.66	ND G	0.60	ND G	0.62
Calcium (Ca)	NA	35100 E	580	28,700	656	29,500	599	17,400	619
Cadmium (Cd)	72	66.2	11.6	438	13.1	103	12.0	123	12.4
Cobalt (Co)	1,400	23.9	5.8	24.7	6.6	45.9	6.0	29.2	6.2
Chromium (Cr)	110,000	560	1.2	457	1.3	1,380	1.2	499	1.2
Copper (Cu)	NA	25,400	58	37,800	65.6	34,600	59.9	22,300	61.9
Iron (Fe)	NA	232,000	232	166,000	263	274,000	240	211,000	248
Potassium (K)	NA	360 B	580	301 B	656	409 B	599	279 B	619
Magnesium (Mg)	NA	7,450	580	7,220	656	5,040	599	3,390	619
Manganese (Mn)	NA	3,910	34.8	2,700	39.4	3,550	35.9	2,630	37.2
Sodium (Na)	NA	192 B	580	342 B	656	236 B	599	247 B	619
Nickel (Ni)	1,500	455	4.6	367	5.3	900	4.8	417	5.0
Antimony (Sb)	30	ND G	139	46.8 B, G	158	22.8 B, G	144	52.6 B, G	149
Vanadium (V)	680	101 B, G	116	70.0 B, G	131	75.2 B, G	120	40.4 B, G	124
Zinc (Zn)	23,000	2,710	46.4	4,450	52.5	3,250	47.9	2,860	49.6
Mercury (Hg)	7.6	15.1 B, G	1.2	324	26.3	27.4	2.4	136	12.4
Hexavalent Chromium (Cr ₆)	230	1.8	0.93	3.8	1.1	5.4	0.96	2.2	0.99

TABLE B-1 (CONT)

**LABORATORY ANALYTICAL RESULTS FOR TOTAL METALS
NEW LYME METALS SITE**

Analyte	Action Level (mg/kg)	Sample # NLM-S12-021810		Sample # NLM-SED01-021810		Sample # NLM-SED02-021810		Sample # NLM-FL01-021810	
		Results (mg/kg)	Reporting Limit (mg/kg)	Results (mg/kg)	Reporting Limit (mg/kg)	Results (mg/kg)	Reporting Limit (mg/kg)	Results (mg/kg)	Reporting Limit (mg/kg)
Arsenic (As)	6.7	ND G	55.80	19.2	2.3	13.5	1.4	28.5	5.3
Lead (Pb)	400	1.930	16.7	40.9	0.68	14.4	0.42	799	1.6
Selenium (Se)	380	ND G	27.9	ND	1.1	ND	0.71	ND G	2.7
Thallium (Th)	6.1	ND G	55.8	ND	2.3	ND	1.4	ND G	5.3
Silver (Ag)	380	21.80	1.1	ND	2.3	ND	1.4	3.7 B, G	5.3
Aluminum (Al)	NA	8,340	22.3	12,000	45.2	10,700	28.3	18,500	21.4
Barium (Ba)	15,000	369	22.3	92.7	45.2	73.6	28.3	221	21.4
Beryllium (Be)	150	ND G	0.56	0.67 B	1.1	0.36 B	0.71	0.23 B	0.53
Calcium (Ca)	NA	20,400	558	2,370	1,130	5,100	708	39,400	535
Cadmium (Cd)	72	100	27.9	2.1	1.1	0.48 B	0.71	41.8	2.7
Cobalt (Co)	1,400	25.2	5.6	14.9	11.3	10.9	7.1	9.5	5.3
Chromium (Cr)	110,000	507	1.1	17.3	2.3	16.8	1.4	173	1.1
Copper (Cu)	NA	90,700	139	71.6	5.6	29.3	3.5	8,890	13.4
Iron (Fe)	NA	194,000	558	33,000	22.6	27,100	14.2	94,200	53.5
Potassium (K)	NA	245 B	558	1040 B	1,130	1,450	708	5,210	535
Magnesium (Mg)	NA	4,160	558	2,820.00	1,130	4,860	708	8,030	535
Manganese (Mn)	NA	2,810	83.6	1,650	3.4	555	2.1	4,700	8.0
Sodium (Na)	NA	107 B	558	227 B	1,130	212 B	708	1,500	535
Nickel (Ni)	1,500	539	4.5	23.1	9.0	28.1	5.7	80.0	4.3
Antimony (Sb)	30	ND G	335	ND	13.6	ND	8.5	16.1 B, G	32.1
Vanadium (V)	680	41.3 B, G	279	24.3	11.3	17.9	7.1	90.8	26.7
Zinc (Zn)	23,000	2,090	112	173	4.5	73.4	2.8	2,930	10.7
Mercury (Hg)	7.6	21.3	2.2	0.21 B	0.23	0.055	0.14	5.7	1.1
Hexavalent Chromium (Cr ₆)	230	2.2	0.89	ND	1.8	0.77 B	1.10	1.7	0.86

TABLE B-1 (CONT)

**LABORATORY ANALYTICAL RESULTS FOR TOTAL METALS
NEW LYME METALS SITE**

Notes:

mg/kg = milligrams per kilogram

Action Level = Ohio Administrative Code 3745-300-08 Residential Land Use Category, Generic Direct Contact Standard for a Single Chemical

ND = Non detect

NA = Not available

B = Estimated result. Result is less than the Reporting Limit

G = Elevated reporting limit. The reporting limit is elevated due to matrix interference

Gray shaded cells indicate analyte concentrations exceeding the OAC action levels.

TABLE B-2

LABORATORY ANALYTICAL RESULTS FOR TCLP METALS

**TABLE B-2
LABORATORY ANALYTICAL RESULTS FOR TCLP METALS
NEW LYME METALS SITE**

Analyte	Action Level (mg/l)	Sample # NLM-S03-021810		Sample # NLM-S06-021810		Sample # NLM-S12-021810	
		Results (mg/l)	Reporting Limit (mg/l)	Results (mg/l)	Reporting Limit (mg/l)	Results (mg/l)	Reporting Limit (mg/l)
Silver (Ag)	5.0	ND	0.5	ND	0.50	ND	0.50
Arsenic (As)	5.0	0.0034 B	0.5	0.0034 B	0.50	0.0050 B	0.50
Barium (Ba)	100.0	2.0 B	10.0	1.6 B	10.0	1.6 B	10.0
Cadmium (Cd)	1.0	6.2	0.50	0.69	0.10	0.77	0.10
Chromium (Cr)	5.0	ND	0.50	ND	0.50	ND	0.50
Lead (Pb)	5.0	1.1	0.50	0.74	0.50	0.84	0.50
Selenium (Se)	1.0	ND	0.25	ND	0.25	ND	0.25
Mercury (Hg)	0.2	0.013	0.0040	0.00018	0.0020	0.00019	2.2

Notes:

TCLP = Toxicity characteristic leachate procedure

mg/l = milligrams per liter

ND = Non detect

B = Estimated result Result is less than the Reporting Limit

Action Level = TCLP Regulatory Limit defined in Title 40 of the Code of Federal Regulations, Part 261.

Gray shaded results indicate an exceedance of the TCLP regulatory limit

TABLE B-3

**LABORATORY ANALYTICAL RESULTS FOR POLYCHLORINATED BIPHENYLS
(PCB)**

**TABLE B-3
LABORATORY ANALYTICAL RESULTS FOR PCBs
NEW LYME METALS SITE**

Analyte	Action Level (mg/kg)	Sample # NLM-S02-021810		Sample # NLM-S03-021810		Sample # NLM-S06-021810		Sample # NLM-S08-021810	
		Results (mg/kg)	Reporting Limit (mg/kg)						
Aroclor 1016	25	ND	1.9	ND	4.3	ND	7.9	ND	8.2
Aroclor 1221	25	ND	1.9	ND	4.3	ND	7.9	ND	8.2
Aroclor 1232	25	ND	1.9	ND	4.3	ND	7.9	ND	8.2
Aroclor 1242	25	22	1.9	25	4.3	42	7.9	48	8.2
Aroclor 1248	25	ND	1.9	ND	4.3	ND	7.9	ND	8.2
Aroclor 1254	25	15	1.9	32	4.3	31	7.9	110	8.2
Aroclor 1260	25	ND	1.9	ND	4.3	ND	7.9	ND	8.2

TABLE B-3 (CONT)
LABORATORY ANALYTICAL RESULTS FOR PCBs
NEW LYME METALS SITE

Analyte	Action Level (mg/kg)	Sample # NLM-S12-021810		Sample # NLM-SED01021810		Sample # NLM-SED02021810		Sample # NLM-FL01-021810	
		Results (mg/kg)	Reporting Limit (mg/kg)	Results (mg/kg)	Reporting Limit (mg/kg)	Results (mg/kg)	Reporting Limit (mg/kg)	Results (mg/kg)	Reporting Limit (mg/kg)
Aroclor 1016	25	ND	3.7	ND	0.075	ND	0.047	ND	0.35
Aroclor 1221	25	ND	3.7	ND	0.075	ND	0.047	ND	0.35
Aroclor 1232	25	ND	3.7	ND	0.075	ND	0.047	ND	0.35
Aroclor 1242	25	ND	3.7	0.85	0.075	ND	0.047	2.7	0.35
Aroclor 1248	25	ND	3.7	ND	0.075	ND	0.047	ND	0.35
Aroclor 1254	25	ND	3.7	0.64	0.075	ND	0.047	1.5	0.35
Aroclor 1260	25	ND	3.7	ND	0.075	ND	0.047	ND	0.35

TABLE B-3 (CONT)
LABORATORY ANALYTICAL RESULTS FOR PCBs
NEW LYME METALS SITE

Analyte	Action Level (mg/kg)	Sample # NLM-FL02-021810		Sample # NLM-D03-021810		Sample # NLM-D04-021810	
		Inside Drum Storage Area		Drum 3		Drum 4	
		Results (mg/kg)	Reporting Limit (mg/kg)	Results (mg/kg)	Reporting Limit (mg/kg)	Results (mg/kg)	Reporting Limit (mg/kg)
Aroclor 1016	25	ND	4.4	ND	1	ND	1
Aroclor 1221	25	ND	4.4	ND	1	ND	1
Aroclor 1232	25	ND	4.4	ND	1	ND	1
Aroclor 1242	25	15	4.4	ND	1	ND	1
Aroclor 1248	25	ND	4.4	ND	1	ND	1
Aroclor 1254	25	15	4.4	ND	1	ND	1
Aroclor 1260	25	ND	4.4	5	1	ND	1

Notes:

NLM = New Lyme Metals

mg/kg = milligrams per kilogram

ND = Non-detect

Action Level = PCB action levels defined in Title 40 of the *Code of Federal Regulations*, Part 761. 61 (a)(4)(i)(B).

TABLE B-4

LABORATORY ANALYTICAL RESULTS FOR ASBESTOS

TABLE B-4 (CONT)
LABORATORY ANALYTICAL RESULTS FOR ASBESTOS
NEW LYME METALS SITE

Sample Number	Sample Material	Friable / Non-friable	Analytical Method	Detection Limit (% asbestos)	Asbestos %	NESHAP Classification
AS-01-021810	Electrical board - pink semi-fibrous material (tile)	Non-friable	600/R-93/116 (PLM - Bulk)	1	ND	NA
AS-02-021810	Electrical board - black transite	Non-friable	600/R-93/116 (PLM - Bulk)	1	20% Chrysotile	Category II
AS-03-021810	Electrical board - dark brown transite	Non-friable	600/R-93/116 (PLM - Bulk)	1	20% Chrysotile	Category II
AS-04-021810	Electrical board - light brown transite	Non-friable	600/R-93/116 (PLM - Bulk)	1	10% Chrysotile	Category II
AS-05-021810	Electrical board - black non-fibrous material	Non-friable	600/R-93/116 (PLM - Bulk)	1	ND	NA
AS-06-021810	Electrical board - dark brown transite	Non-friable	600/R-93/116 (PLM - Bulk)	1	20% Chrysotile	Category II
AS-07-021810	Electrical board - brown semi-fibrous material	Non-friable	600/R-93/116 (PLM - Bulk)	1	ND	NA
AS-08-021810	Cable coating - light brown fibrous material	Non-friable	600/R-93/116 (PLM - Bulk)	1	ND	NA
AS-08-021810	Cable coating - black non-fibrous material	Non-friable	600/R-93/116 (PLM - Bulk)	1	ND	NA
AS-09-021810	Soil (XRF sample location)	Non-friable	CARB 435 & 600/R-93/116 (PLM - Soil)	0.25	ND	NA
AS-10-021810	Soil (XRF sample location)	Non-friable	CARB 435 & 600/R-93/116 (PLM - Soil)	0.25	ND	NA

Notes:

PLM = Polarized light microscopy

CARB = California Air Resource Board

% = percent

ND = Non detect for asbestos fibers

NESHAP = National Emission Standards for Hazardous Air Pollutants

NA = Not Applicable

Category II = Asbestos containing building materials that may become friable (RACM) during normal demolition operations

ATTACHMENT I

DETAILED CLEANUP CONTRACTOR COST ESTIMATE

**NEW LYME METALS SITE
NEW LYME, ASHTABULA COUNTY, OHIO
MAY 2010**

The estimated cleanup contractor (ERRS) costs necessary to complete the removal action at the New Lyme Metals Site are as follows:

Personnel & Equipment	\$22,932
Materials/Misc	\$27,495
Transportation & Disposal	\$21,100
Sub-Total	\$71,527
Plus 20% Contingency	\$14,305
Total ERRS Contractor Costs	\$85,832

ATACHMENT II



U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

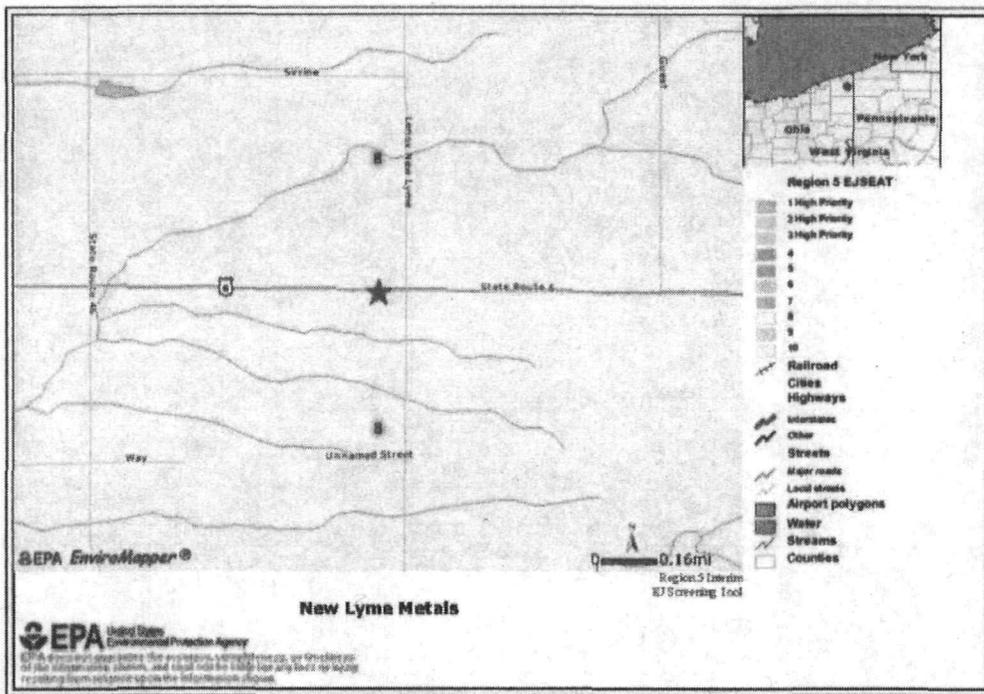
ADMINISTRATIVE RECORD FOR NEW LYME METALS SITE NEW LYME, ASHTABULA COUNTY, OHIO

ORIGINAL
MAY 2010

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	09/00/95	ATSDR	File	ToxFAQs for Antimony CAS #007440-36-0	2
2	04/00/99	ATSDR	File	ToxFAQs for Mercury CAS #7439-97-6	2
3	02/00/01	ATSDR	File	ToxFAQs for Poly- chlorinated Biphenyls	2
4	09/00/01	ATSDR	File	ToxFAQs for Asbestos CAS #1332-21-4	2
5	02/02/05	Novak, P., U.S. EPA	Restaino, T., U.S. EPA	Memorandum re: Transmittal of PCB Compliance Inspection Report for the New Lyme Metals Site	67
6	08/00/07	ATSDR	File	ToxFAQs for Arsenic CAS #7440-38-02	2
7	08/00/07	ATSDR	File	ToxFAQs for Lead CAS #7439-92-1	2
8	09/00/08	ATSDR	File	ToxFAQs for Cadmium CAS #774-43-9	2
9	09/09/09	Clouse, K., Ohio EPA	Durno, M., U.S. EPA	Letter re: Ohio EPA's Request for U.S. EPA Assistance in Conducting a Potential Time-Critical Removal Action at the New Lyme Salvage Yard w/Attached Removal Action Referral Package	23
10	03/04/10	Lam. S., U.S. EPA	Kollar, K., Ohio EPA	Letter re: U.S. EPA Request for ARARs for the New Lyme Metals Site	2
11	04/22/10	Weston Solutions, Inc.	U.S. EPA	Site Assessment Report for the New Lyme Metals Site	193

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
12	00/00/00	Lam, S., & J. Justice, U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Request for a Time-Critical Removal Action at the New Lyme Metals Site (PENDING)	

ATTACHMENT III
REGION 5 EJ ANALYSIS



400 x 300 600 x 450 800 x 600 Locator Map

ATTACHMENT IV

INDEPENDENT GOVERNMENT COST ESTIMATE

**NEW LYME METALS SITE
NEW LYME, ASHTABULA COUNTY, OHIO**

MAY 2010

(REDACTED 3 PAGES)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION