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PERIMETER SITE FENCING WORK PLAN

United Scrap Lead Site
Troy, Ohio

PERIMETER SITE FENCING WORK PLAN

**United Scrap Lead Site
Troy, Ohio**

**DECEMBER 1991
REF. NO. 2959 (2)**

CONESTOGA-ROVERS & ASSOCIATES

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 STATEMENT OF WORK.....	3
3.0 HEALTH AND SAFETY PLAN	5
4.0 MOBILIZATION AND SITE PREPARATION	6
5.0 FENCE INSTALLATION	7
6.0 DEMOBILIZATION AND CLOSEOUT	9
7.0 SCHEDULE OF WORK AND FINAL REPORT.....	10

LIST OF FIGURES

		<u>Following Page</u>
FIGURE 1.1	SITE LOCATION	1
FIGURE 2.1	PROPOSED FENCING LOCATION	3
FIGURE 7.1	PERIMETER FENCING IMPLEMENTATION SCHEDULE	10

LIST OF APPENDICES

APPENDIX A	HEALTH AND SAFETY PLAN
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1.0 INTRODUCTION

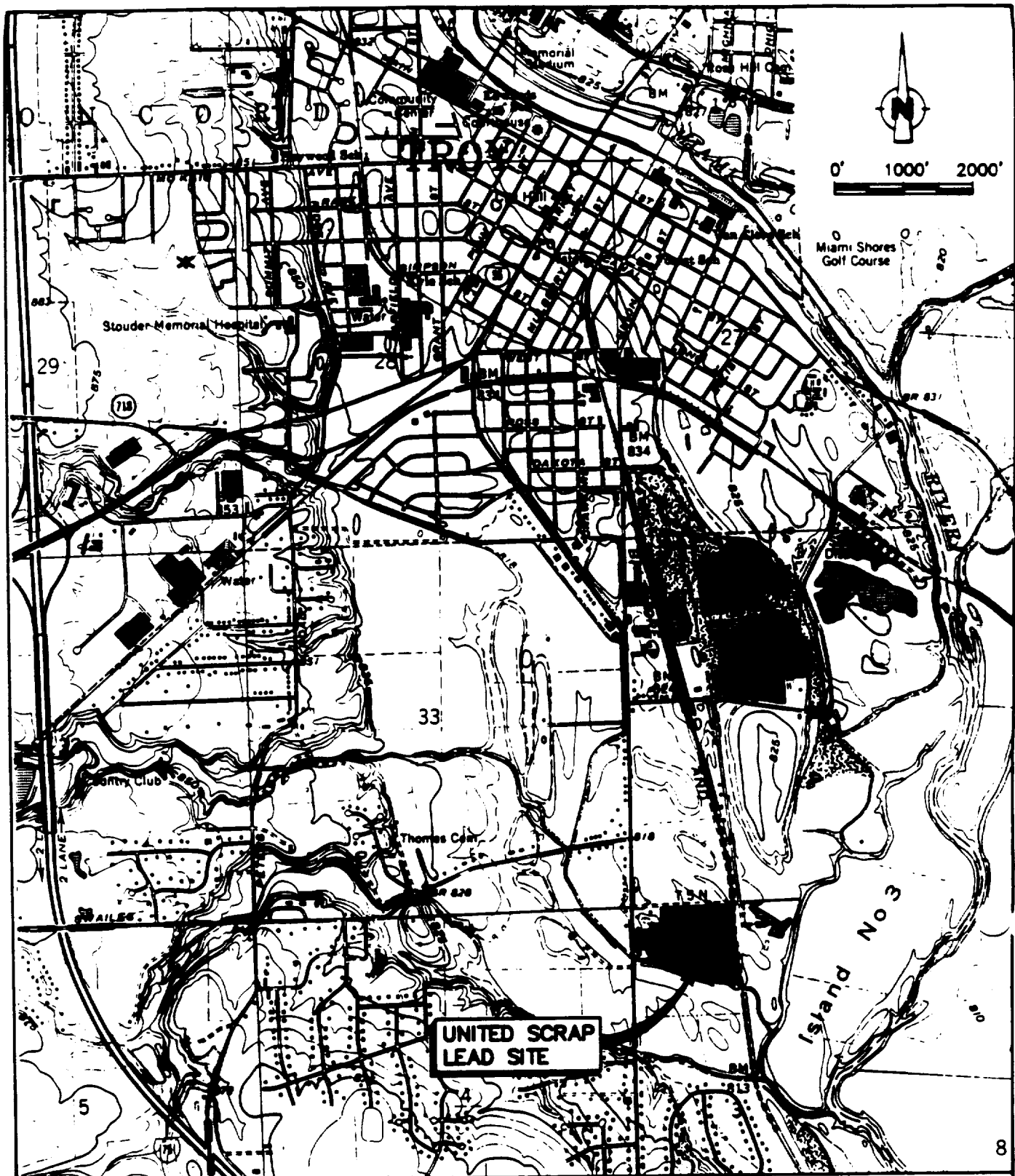
The United Scrap Lead Site (Site) is located at 2117 South County Road 25A, approximately one mile south of the City of Troy in Ohio as shown on Figure 1.1. The Site is bordered by farm fields to the north and south, by several residences, one commercial property and County Road 25A to the west, and by the Baltimore and Ohio Railroad to the east.

The Site was previously used as a facility for lead reclamation from used batteries. Spent battery casings were discarded in several large waste piles which are still present at the Site. Sampling by the United States Environmental Protection Agency Region V (USEPA) has shown that lead may be remaining in the spent battery casings and may be present in some soils at the Site.

An existing fence surrounding the Site has deteriorated due to acts of vandalism, harsh weather conditions and time, resulting in trespassers and wildlife potentially being able to gain access to the Site and the spent battery casings stockpiled at the Site.

USEPA and the Respondents have negotiated an Administrative Order by Consent (AO), effective as of September 12, 1991, to install a new chain link fence along the perimeter of the Site. The purpose of the fence is to provide adequate access restriction to the Site.

As required by paragraph 8 on page 6 of the AO, during implementation of this Work Plan, the On-Scene Coordinator (OSC) shall



SOURCE: USGS QUADRANGLE MAP TROY, OHIO



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figure 1.1
SITE LOCATION
UNITED SCRAP LEAD SITE
Troy, Ohio

have the authority vested in an OSC by the NCP, 40 CFR Part 300, as amended, including the authority to halt, conduct, or direct any work required by this Order.

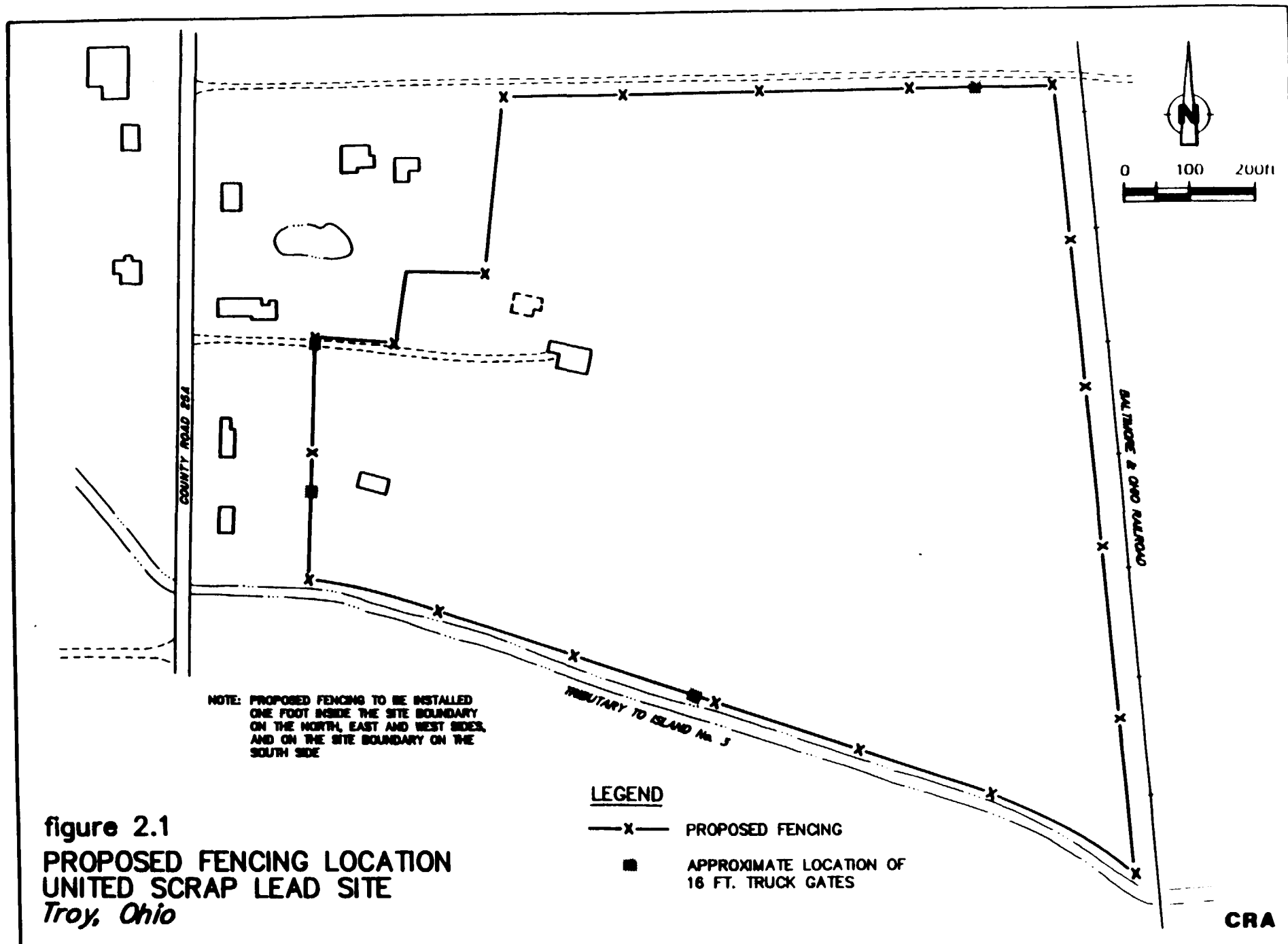
This Work Plan is submitted as the first activity required by the AO, and is organized as follows:

- i) Section 1 presents the location of the Site and the purpose and format of the Work Plan;
- ii) Section 2 presents the Statement of Work for implementation of the Site perimeter fencing;
- iii) Section 3 presents the health and safety requirements during implementation of the Site perimeter fencing;
- iv) Section 4 presents the mobilization and Site preparation activities;
- v) Section 5 presents the fence installation activities;
- vi) Section 6 presents the demobilization and project closeout activities; and
- vii) Section 7 presents the schedule of work and final report requirements.

2.0 STATEMENT OF WORK

The Work Plan for installation of a perimeter fence at the United Scrap Lead Site is based on the requirements of the AO, and consists of the following activities:

- i) obtaining an access agreement for the Site and verbally notifying adjacent property owners of the intention to install a fence along the perimeter of the Site;
- ii) establishing the legal boundaries of the Site by a surveyor licensed in the State of Ohio;
- iii) development and implementation of a Site-specific health and safety plan for surveying, clearing and grubbing and fencing activities along the perimeter of the Site;
- iv) clearing and grubbing of vegetation along the alignment of the proposed fence installation;
- v) installation of a perimeter fence at the location shown on Figure 2.1, and to the following minimum specifications as defined in the AO:
 - fence posts are to be inserted to a depth of at least 18 inches
 - fence posts installed are to be a minimum of six feet high, covered with chain link fence fabric and three strands of barbed wire along the top of the fence posts



- along the south perimeter of the Site, the fence posts are to be installed on the property line
- along the north, east and west perimeter of the Site, the fence posts are to be installed such that the distance between the property line and the fence does not exceed one foot
- two 16-foot wide truck gates are to be installed on the west side of the Site
- one 16-foot wide truck gate is to be installed on the north side of the Site
- one 16-foot wide truck gate is to be installed on the south side of the Site.

vi) demobilization of all clearing and grubbing and fence installation equipment; and

vii) submission of a final report.

3.0 HEALTH AND SAFETY PLAN

All personnel involved in surveying, clearing and grubbing or fence installation activities at the Site will be required to comply with the requirements of the Site-specific Health and Safety Plan (HSP) as presented in Appendix A. The Site-specific HSP has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) regulations applicable to Hazardous Waste Operations and Emergency Response, 29 CFR Part 1910.120, and incorporates the applicable training requirements of 29 CFR 1910.120(e), as interpreted by OSHA. The HSP specifically includes personal air monitoring and blood lead level testing, pre- and post-construction, for workers actively involved in clearing and grubbing and fence installations, as required by the AO. Level D Personal Protective Equipment (PPE) will be required for all surveying personnel working on the Site and modified Level D PPE will be required for all clearing and grubbing and fence installation personnel working on the Site.

4.0 MOBILIZATION AND SITE PREPARATION

Prior to commencing with the surveying, clearing and grubbing, and fence installation activities, an access agreement will be obtained from the Site property owner(s), and adjacent property owners will be verbally notified of the intention to install the chain link fence along the perimeter of the Site.

Setting and staking of the legal boundaries of the Site will be performed by a surveyor licensed in the State of Ohio, following securement of Site access.

Clearing and grubbing of vegetation, debris and existing deteriorated fencing along the alignment of the proposed fence will commence following establishment of the legal boundaries of the Site. [The existing fence will be left in place where it does not interfere with the installation of the new fence.] Where required, trees and existing fence posts along the Site boundary will be cut off at ground level. Vegetation removed from the alignment of the proposed fence during clearing and grubbing operations will be chipped, where possible, and evenly spread on Site over the ground adjacent to the new fence. Ground undulations along the fence line ~~will be~~ corrected to obtain a uniform gradient between fence posts. Debris, if any, removed from the fence alignment will be neatly stockpiled on Site and old fencing removed will be disposed off Site at a facility approved by the OSC.

5.0 FENCE INSTALLATION

On completion of clearing and grubbing operations, holes for straining posts, line posts, corner posts and gate posts will be augered a minimum depth of 18 inches into the ground. The posts then will be concreted in place and left for a minimum of five days prior to installation of the fence fabric, tension and barbed wire. Barbed wire extension arms will be turned outward away from the fenced area, with vertical extension arms on gates. Soil removed from the post holes will be spread evenly on the Site adjacent to the fence posts. During augering of post holes, dust generation will be minimized by water spraying if necessary. The 6-foot high chain link fence with three strands of barbed wire across the top will be installed one foot inside the Site boundary staked by the Surveyor, except on the south perimeter where it will be installed on the Site boundary.

Braces, top rails and tension wires will be installed between the fence posts. Chain link fence fabric (complying with ASTM A392) will be stretched to the tension recommended by the manufacturer and fastened to corner, gate and straining posts. The fence fabric will be installed in such a manner to ensure a maximum clearance of three inches between the bottom of the fence fabric and the ground surface.

Four 16-foot wide truck gates will be installed, plumb in a closed position, at the following locations and as shown on Figure 2.1:

- i) two truck gates on the west side of the Site;
- ii) one truck gate on the north side of the Site; and
- iii) one truck gate on the south side of the Site.

6.0 DEMOBILIZATION AND CLOSEOUT

On completion of the clearing and grubbing and fence installation activities detailed in Section 5.0, the following demobilization and closeout activities will be implemented:

- i) old fencing materials removed, decontamination water and used disposable PPE will be disposed off-Site at a facility approved by the OSC;
- ii) all plant and equipment used on Site will be cleaned of visual soils and demobilized; and
- iii) the four truck gates will be closed and locked and the keys will be submitted to the OSC.

7.0 SCHEDULE OF WORK AND FINAL REPORT

A schedule of work for implementation of the AO is presented as Figure 7.1. The estimated time for completion of the activities required by the AO is 152 days from the effective date of the AO. This includes 30 days for submission of the Work Plan to USEPA, a 9-week Work Plan approval period, and 60 days for completion of surveying, clearing and grubbing and fence installation from approval of the Work Plan by USEPA.

A final report summarizing the actions taken to comply with the AO will be submitted to USEPA within 30 calendar days of completion of the work required by the AO. The final report will, as a minimum, include the requirements of Paragraph 23 of the AO.

ACTIVITY	SCHEDULE						
	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH
A. WORK PLAN (INCLUDING HEALTH AND SAFETY PLAN AND SCHEDULE OF WORK TO BE PERFORMED) -PREPARE AND SUBMIT TO USEPA -REVIEW AND APPROVAL BY USEPA	(SEPT 12, 1991)	(OCT 10, 1991)		(DEC. 13, 1991)			
B. SITE BOUNDARY LOCATION -SOLICIT AND EVALUATE QUOTATIONS -LAYOUT OF PROPERTY BOUNDARIES				(DEC. 17 & 18, 1991)			
C. FENCING OF SITE -PREPARE SPECIFICATIONS, SOLICIT AND EVALUATE BIDS -CLEAR AND GRUB FENCE LINE -INSTALL SITE PERIMETER SECURITY FENCE				(DEC. 18, 1991)	(JAN. 8, 1992)	(FEB. 11, 1992)	
D. CONSTRUCTION REPORT							(MAR. 12, 1992)

figure 7.1
 PERIMETER FENCING IMPLEMENTATION SCHEDULE
 UNITED SCRAP LEAD SITE
 Troy, Ohio

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APPENDIX A
HEALTH AND SAFETY PLAN

UNITED SCRAP LEAD SITE
TROY, OHIO

TABLE OF CONTENTS

	<u>Page</u>
A.1.0 GENERAL.....	A-1
A.2.0 SITE CHARACTERIZATION AND POTENTIALLY HAZARDOUS COMPOUNDS	A-3
A.3.0 BASIS.....	A-4
A.4.0 RESPONSIBILITIES AND ADMINISTRATION	A-6
A.5.0 MEDICAL SURVEILLANCE	A-8
A.6.0 TRAINING.....	A-10
A.7.0 WORK AREAS.....	A-11
A.8.0 PERSONAL PROTECTIVE EQUIPMENT(PPE).....	A-13
A.9.0 RESPIRATORY PROTECTION PROGRAM	A-15
A.10.0 PERSONAL HYGIENE.....	A-16
A.11.0 AIR MONITORING	A-17
A.12.0 COMMUNICATIONS.....	A-18
A.13.0 EMERGENCY AND FIRST AID EQUIPMENT	A-19
A.14.0 EMERGENCY RESPONSE PLAN.....	A-20
A.15.0 EQUIPMENT AND PERSONNEL DECONTAMINATION.....	A-21
A.16.0 CONTAMINATION MIGRATION CONTROL.....	A-22

LIST OF FIGURES

	<u>Following Page</u>
FIGURE A.1 EMERGENCY HOSPITAL ROUTE	A-18

LIST OF TABLES

TABLE A.1 RESULTS OF SOIL SAMPLE ANALYSIS	A-3
TABLE A.2 LEVEL OF PERSONAL PROTECTIVE EQUIPMENT	A-13
TABLE A.3 EMERGENCY TELEPHONE NUMBERS	A-18

LIST OF ATTACHMENTS

ATTACHMENT A-1	EMPLOYER'S SITE-SPECIFIC HEALTH AND SAFETY PLAN
ATTACHMENT A-2	FIGURES 4-3 AND 4-4 FROM THE RI REPORT
ATTACHMENT A-3	TRAINING ACKNOWLEDGEMENT FORM

A.1.0 GENERAL

The implementation of an Administrative Order by Consent to perform fencing activities at the United Scrap Lead Site (Site) near Troy in Miami County, Ohio will involve surveying the legal boundaries of the Site, clearing and grubbing along the perimeter of the Site and installation of a chain link fence along the perimeter of the Site. During these operations, personnel may come in contact with soils which potentially contain hazardous wastes or hazardous waste constituents. To ensure that direct contact by Site personnel with potentially contaminated material is minimized, an overall Site-specific Health and Safety Plan (HSP) has been developed, as presented herein. Each employer involved in surveying, clearing and grubbing or fencing activities at the Site must complete an employer-specific HSP, which must satisfy the minimum requirements of Attachment A-1 to this overall Site-specific HSP. This overall Site-specific HSP has been developed to ensure the following:

- i) that Site personnel are not adversely exposed to the compounds of concern;
- ii) that public welfare or the environment are not adversely impacted by ~~off~~-Site migration of contaminated materials due to work activities at the Site;
- iii) compliance with applicable governmental and non-governmental [American Conference of Governmental Industrial Hygienist (ACGIH)] regulations and guidelines. In particular, the amended rules of the

Occupational Safety and Health Act for Subpart H of Part 1910 (Title 29 Code of Federal Regulations (CFR) Part 1910.120) will be implemented for all Site work; and

- iv) initiation of proper emergency response procedures to minimize the potential for any adverse impact to Site workers, the general public or the environment.**

For the purpose of this HSP, all surveying, clearing and grubbing and fence installation activities performed on Site will require personal protective equipment (PPE). A detailed description of the PPE required is presented in Section A.8.

All on-Site activities associated with the requirements of the fencing activities, as defined in the AO, will be conducted in accordance with the provisions of this overall Site-specific HSP. Cost and/or scheduling considerations will not be considered as justification for modifying this plan. A copy of this HSP will be maintained on Site whenever Site activities associated with the fencing activities are in progress.

A.2.0 SITE CHARACTERIZATION AND POTENTIALLY HAZARDOUS COMPOUNDS

Characterization of the Site contamination, including extent of contamination and magnitude of contamination, were performed by Camp Dresser and McKee, Inc. on behalf of the United States Environmental Protection Agency (USEPA), and are included in the report entitled "Remedial Investigation Report for United Scrap Lead Site, Troy, Ohio" (RI Report) dated February 1988. Anticipated exposure to Site related contaminants could occur through inhalation of contaminated particulates and through direct contact with contaminated soils. Results of the analysis of surficial soils at the Site are presented in Table A.1, which is reproduced from Table 7-10 of the RI Report. Lead was selected as the contaminant of primary concern at the Site, as stated in Section 7.3.5 of the RI report. The Material Safety Data Sheet (MSDS) for lead is attached to the draft employer-specific HSP in Attachment A-1. Figures 4-3 and 4-4 from the RI Report, which illustrate the areas of lead contamination detected in surficial soils and soils at depth, respectively, are included in Attachment A-2.

TABLE A.1
RESULTS OF SOIL SAMPLE ANALYSIS
UNITED SCRAP LEAD SITE (1)
TROY, OHIO

	<i>Off-Site Samples</i>			<i>On-Site Samples</i>		
	<i>Geometric Mean Concentration (2) (mg/kg)</i>	<i>Range of Concentration (mg/kg)</i>	<i>Number of Samples with Contaminant Detected over Number of Samples</i>	<i>Geometric Mean Concentration (mg/kg)</i>	<i>Range of Concentration (mg/kg)</i>	<i>Number of Samples with Chemical Detected over Number of Samples</i>
Aluminum	6,500	4,180 - 8,820	8/8	5,840	782 - 12,600	25/25
Arsenic	10.6	8.3 - 13	8/8	17	< 5.3 - 444	24/25
Antimony	NC (4)	<16 (3)	0/8	NR	<16 - 3,150	3/25
Barium	75	43 - 93	8/8	116	11 - 278	25/25
Beryllium	0.65	<.26 - 1.3	7/8	0.73	0.42 - 1.2	21/25
Cadmium	NC	<2.4 - 3.1	4/8	2.4	<2.2 - 7.0	10/25
Calcium	7,910	2,100 - 30,500	8/8	20,430	2,260 - 133,000	25/25
Chromium	11.6	7.8 - 16	8/8	17	7.9 - 56	25/25
Cobalt	8.6	7.4 - 9.4	8/8	8.5	<3.2 - 13	20/25
Copper	19	15 - 23	8/8	29	11 - 167	24/25
Iron	14,800	10,400 - 17,500	8/8	15,200	3,700 - 28,200	25/25
Lead	45	17 - 92	8/8	474	33 - 385,000	25/25
Magnesium	4,860	1,450 - 14,000	8/8	11,490	1,430 - 52,900	25/25
Manganese	652	419 - 830	8/8	390	58 - 659	25/25
Mercury	NR (5)	<0.061 - 0.12	2/8	0.077	<0.053 - 1.8	12/25
Nickel	13	9.5 - 17	8/8	20	8.4 - 120	25/25
Potassium	838	658 - 1,340	8/8	1,304	835 - 3,930	25/25
Sodium	NR	<461 - 1,358	3/8	722	<461 - 5,780	15/25
Silver	NC	<2.9	0/8	<2.9	<2.9 - 2.9	2/25
Thallium	NC	<5.2	0/8	<11	<11 - 7.5	1/25
Vanadium	21	17 - 26	8/8	20	8.1 - 37	25/25
Zinc	57	43 - 76	7/8	92	43 - 808	25/25
Sulfate	68	<30 - 210	6/8	110	<30 - 1,310	20/23

Notes:

- (1) Reproduced from Table 7-10 of "Remedial Investigation Report for United Scrap Lead Site, Troy, Ohio" dated February 1988.
- (2) In calculating geometric means of detected chemicals, one-half the detection limit was used for samples where the chemical was not detected.
- (3) <X = chemical not detected, where 'x' is the detection limit.
- (4) NC = not calculated - - chemical never detected.
- (5) NR = not reported-geometric mean less than detection limit.

A.3.0 **BASIS**

The Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29, CFR, Parts 1910 and 1926 (29 CFR 1910 and 1926), including the amended sections in 29 CFR 1910.120 and current Threshold Limit Values (TLVs) as provided by the ACGIH, provide the basis for this HSP. Some of the specifications within this section are in addition to OSHA regulations and reflect the positions of USEPA, the National Institute for Occupational Safety and Health (NIOSH) and the United States Coast Guard (USCG) regarding procedures required to ensure safe operations at potential hazardous waste sites. In addition, the following references have been used as guidance in developing the HSP:

- i) CERCLA Sections 104(f) and 111(c) (6);
- ii) EPA Order 1440.2 - Health and Safety Requirements for Employees Engaged in Field Activities;
- iii) EPA Order 1440.1 - Respiratory Protection;
- iv) EPA Interim Standard Operating Safety Guide (September 1982);
- v) Threshold Limit Values (TLV) for Chemical Substances and Physical Agents in the Work Environment with Intended Changes Adopted by **ACGIH**;
- vi) **ANSI Z 88.2-1980**, American National Standard, Practices for **Respiratory Protection**; and
- vii) **Air Sampling Instruments for Evaluation of Atmospheric Contaminants**, 6th edition, 1983, American Conference of Governmental Industrial Hygienists.

The safety and health of the public and on-Site personnel and the protection of the environment will take precedence over cost and schedule considerations for all project work. Each employer will designate an on-Site individual as Site Safety Officer (SSO) during on-Site fence installation and associated activities. The SSO will be responsible for decisions regarding when work will be stopped or started for health or safety considerations. Each employer will provide an employer-specific HSP related to the specific activities its employees will perform at the Site. A draft employer-specific HSP is included as Attachment A-1, for each employer to complete.

A.4.0 RESPONSIBILITIES AND ADMINISTRATION

The SSO will supervise the implementation of the HSP and will be responsible for all decisions regarding operations and work stoppages due to health and safety considerations.

The responsibilities of the SSO will be as follows:

- i) implementation of the HSP at the initiation of Site work;
- ii) conduct the initial briefing sessions for all its employer's personnel with regard to the HSP and other safety requirements to be observed during fence installation and associated activities, including:
 - a) potential hazards,
 - b) personal hygiene principles,
 - c) PPE, and
 - d) emergency procedures dealing with fire and medical situations;
- iii) review and modify the HSP in consultation with the OSC as more ~~information~~ information becomes available, if any, concerning the hazardous ~~materials~~ materials involved, and review all monitoring reports;
- iv) supervision and enforcement of safety equipment usage and maintenance;

- v) **personnel training in safety equipment usage and emergency procedures;**
- vi) **monitoring of the health and safety program;**
- vii) **suspend work activity if unsafe working conditions develop, including high winds, lightning and heavy rain, and notify the OSC within 24 hours;**
- viii) **inform workers of the nature of chemical exposure risk as required by the "Right-to-Know" Law;**
- ix) **recommend medical examination when worker appears to require it;**
- x) **ensure all employees actively involved in the installation of fence posts on the Site obtain pre- and post-construction blood lead-level tests;**
- xi) **coordination of emergency procedures, including notifying the OSC within 24 hours; and**
- xii) **maintain a sign-in log on Site for all personnel and visitors entering the Site.**

A.5.0 MEDICAL SURVEILLANCE

In accordance with requirements detailed in 29 CFR 1910.120 and 29 CFR 1910.134, all Site personnel who will potentially come in contact with potentially contaminated materials will have received, within one year prior to starting field activities, medical surveillance by a licensed physician or physician's group. Medical surveillance will include pre- and post-construction blood lead-level testing, including zinc protoporphyrin testing, for all workers actively involved in clearing and grubbing and fence installation activities.

Medical records for all Site personnel who will potentially come in contact with potentially contaminated materials will be maintained by their respective employer. The medical records will detail the tests that were taken and will include a copy of the consulting physician's statement regarding the tests and the employees' suitability for work, including the employees' suitability for working with potential lead-contaminated materials. These medical records must be available to the employee or his designated representative upon written request, as outlined in 29 CFR 1910.120, Section (f).

Each employer will ensure and certify to the SSO and the OSC that its personnel involved in activities associated with potentially contaminated materials will have had all necessary medical examinations prior to commencing work within contaminated areas. Personnel not obtaining medical certification, or who do not have their records up-to-date,

and clearing and grubbing and fence post installation workers who have not had pre-construction blood lead-level testing, will not perform work on Site.

Interim medical surveillance will be completed if an individual exhibits poor health or high stress responses due to on-Site activity or when accidental exposure to elevated concentrations of contaminants occurs.

Employers will be required to submit results of the pre-construction blood lead-level testing prior to construction, and the results of the post-construction blood lead-level testing after completion of the on-Site fencing activities, including a consulting physician's statement regarding the results of the tests.

A.6.0 TRAINING

The SSO will require that all Site personnel who will come in contact with potentially contaminated materials complete training sessions in accordance with 29 CFR 1910.120 prior to entering the Site. This training shall consist of a minimum of 40 hours of instruction off Site and three days of actual field experience under direct supervision. Each employer will maintain documentation stating that its on-Site personnel have complied with this regulation, and shall provide the OSC with copies of all training certificates and/or acknowledgements.

Prior to commencing Site activities, all personnel will be required to attend a Site-specific initiation session. These sessions, conducted by the respective employer's SSO, will be used to instruct the Site personnel as to what the potential Site hazards are, level of PPE required, Site-specific requirements and the basis of the HSP. At the initiation session it will be confirmed that all on-Site personnel have the 40 hours of training required in accordance with 29 CFR 1910.120 and that clearing and grubbing and fence installation workers have had the required pre-construction blood lead-level testing. All personnel who attend the initiation session will be required to sign a ~~Training~~ Acknowledgement Form, an example of which is presented as Attachment A-3.

A.7.0 WORK AREAS

All Site work zones will be clearly laid out and identified in the field prior to initiation of Site work activities. The establishment of the work zone boundaries may be modified by the SSO and/or Site Coordinator in coordination with the OSC. The purpose of establishing work zones is to limit access to potentially contaminated areas or areas which may cause physical injury to individuals and to prevent the migration of potentially hazardous materials onto adjacent non-contaminated areas. The designated work zones will be as follows:

- i) **Exclusion Zone (EZ)** - this zone will include all areas where potentially contaminated soils or waste material are located. Specifically, the EZ will include all existing waste stockpile areas and areas where the lead concentration in the soil exceeds 500 milligrams per kilogram (mg/kg) as delineated on Figures 4.3 and 4.4 of the RI Report, and included as Attachment A-2 for ease of reference. The EZ will be delineated in the field with flagging. Access to the EZ will not be permitted during implementation of the AO; and
- ii) **Contamination Reduction Zone/Support Zone (CRZ/SZ)** - this zone will include remaining areas of the Site and areas where Site activities associated with surveying, clearing and grubbing and fence installation will occur. Sufficient area will be provided for efficient movement of personnel and equipment. Access to the CRZ/SZ will be restricted to personnel who are wearing the proper PPE, have received and passed the required medical examination and blood lead-level tests and have

undergone the required health and safety training. A log of entry to and exit from the CRZ/SZ will be maintained by the SSO for the purpose of stress monitoring and determining exposure times.

A.8.0 PERSONAL PROTECTIVE EQUIPMENT(PPE)

The SSO will require that all personnel are equipped with PPE appropriate for the nature of work being completed. The SSO will require that all safety equipment and protective clothing are kept clean, well maintained and that their integrity is intact.

Safety equipment and apparel as required for all work on Site in the CRZ/SZ will be as specified in Table A.2. The level of protection, as well as the anticipated hazards/risks for the fence installation and associated Site activities, also are presented in Table A.2.

Level D PPE which will be used on Site consists of the following:

- i) coveralls;
- ii) gloves;
- iii) boots/shoes (leather or chemical-resistant) with steel toe and shank;
- iv) safety glasses; and
- v) hard hat.

Modified Level D PPE which will be used on Site consists of the following:

- i) tyvek coveralls;
- ii) nitrile gloves;
- iii) boots/shoes (leather or chemical resistant) with steel toe and shank;

TABLE A.2
LEVEL OF PERSONNEL PROTECTIVE EQUIPMENT
FENCING AND ASSOCIATED ACTIVITIES
UNITED SCRAP LEAD SITE
TROY, OHIO

<i>Work Activity</i>	<i>Anticipated Hazards/Risks</i>	<i>Level of PPE Required</i>
Land Surveying	• slip/trip/fall hazards • potential back injuries from lifting and moving • potential contact with contaminated soil	Level D
Clearing & Grubbing	• slip/trip/fall hazards • potential contact with contaminated soil • potential dust emissions • hazards presented by the use of brush/tree cutting/chipping equipment and clearing and grubbing equipment	Modified Level D
Fencing	• slip/trip/fall hazards • potential contact with contaminated soil • potential dust emissions • hazards presented by working with barbed wire • hazards presented by working with fencing materials	Modified Level D

- iv) disposable over-boots;
- v) safety glasses; and
- vi) hard hat.

Additional protective equipment usage guidelines to be implemented include:

- i) prescription eyeglasses in use on the Site will be safety glasses; and
- ii) contact lenses will not be permitted.

A.9.0 RESPIRATORY PROTECTION PROGRAM

Dust originating from soils containing lead at a concentration of 500 mg/kg would need to be at a concentration of 300 milligrams per cubic meter (mg/m^3) in the air in order to attain the TLV for lead of $0.15 \text{ mg}/\text{m}^3$. The OSHA standard for Total Nuisance Dust is $15 \text{ mg}/\text{m}^3$. Therefore, by confining work areas to areas of the Site with soil lead levels less than 500 mg/kg and maintaining the total dust concentration in the breathing zone to less than $15 \text{ mg}/\text{m}^3$, the Permissible Exposure Level (PEL) for Lead of $0.05 \text{ mg}/\text{m}^3$ (29 CFR 1910.1000) should not be exceeded.

Furthermore, USEPA has established cleanup levels for lead ranging from 500 to 1000 ppm at Superfund sites. This range of cleanup levels for lead was established as "protective for direct contact in residential settings" (USEPA, OSWER, Directive OSWER 9355.4-02, September 7, 1989). As activities at the Site only will be conducted on areas of the Site where lead concentrations in the soils are less than 500 mg/kg, personnel exposure to lead in the air should remain below the PEL for lead.

Based on the above, respirators will not be required by personnel involved with the surveying, clearing and grubbing or fence installation activities at the Site. A real time air monitor will be used when in the CRZ for determination of potential employee exposure to potentially lead contaminated dust. Work will cease if sustained total dust levels exceed $15 \text{ mg}/\text{m}^3$.

A.10.0**PERSONAL HYGIENE**

The SSO will require that all personnel performing or supervising work within the CRZ observe and adhere to the personal hygiene-related provisions of this section. On-Site personnel found to be disregarding the personal hygiene-related provisions of this HSP will, at the discretion of the SSO, be barred from the Site.

The SSO also will enforce the following regulations for personnel actively participating in the on-Site clearing and grubbing and fence installation activities:

- i) on-Site personnel will wear appropriate PPE when in the CRZ;
- ii) outerwear will not be reused if deemed to be unsuitable to provide the necessary protection, and on completion of on-Site activities will be placed in suitable containers and removed off Site;
- iii) smoking and eating will be prohibited on Site;
- iv) ~~on-Site~~ personnel will thoroughly cleanse their hands, face, neck area ~~and~~ other exposed areas before eating; and
- v) on-Site personnel will utilize a portable toilet, if required, during on-Site activities.

A.11.0 AIR MONITORING

During the progress of active work, air quality on Site will be periodically monitored and the results shall be provided to the OSC upon request. Total dust monitoring will be conducted on a daily basis and additionally as required by special or work-related conditions.

The results of the air monitoring program will be recorded in a log book which will be maintained on Site. Work will cease if sustained total dust levels exceed 15 mg/m³.

Personal air monitoring will be conducted using a real time air monitor to monitor the level of dust in the air at the breathing zone at the work Site. The results of the real time air monitoring will be recorded at four intervals each day, or as working conditions change, in a log book which will be maintained on Site.

A.12.0 COMMUNICATIONS

Emergency numbers including police, fire, ambulance, hospital and appropriate Regulatory Agencies and directions to the Hospital are presented in Table A.3 and will be prominently posted in each employer's vehicles.

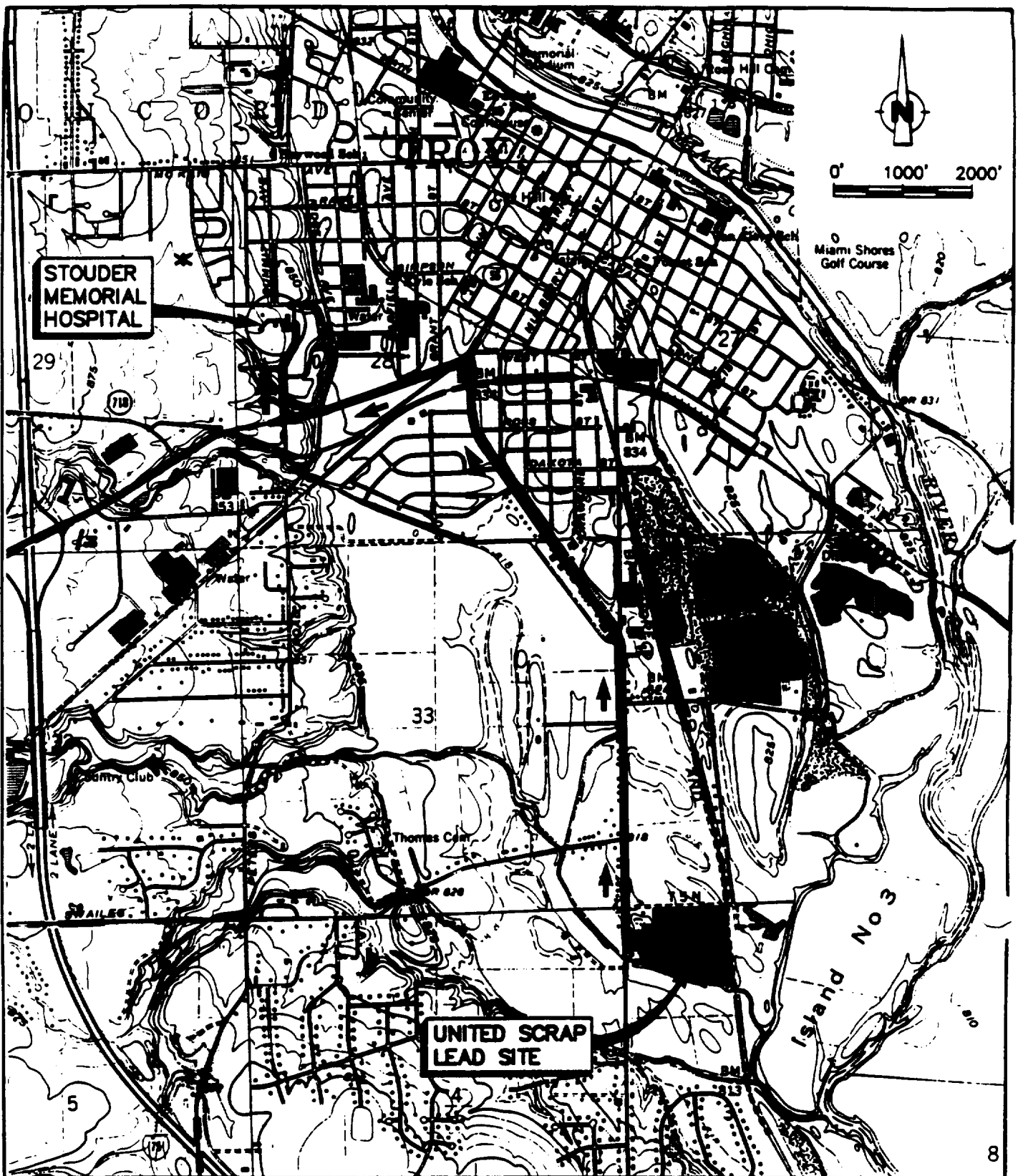
A route map to the nearest emergency medical facility is presented in Figure A.1 and will be posted in each vehicle. Prior to initiating Site activities, the emergency medical facility will be notified of Site activities to ensure preparedness to respond to any Site-related injuries.

TABLE A.3
EMERGENCY TELEPHONE NUMBERS
UNITED SCRAP LEAD SITE
TROY, OHIO

General Emergency (Sheriff's Dept.)	911
Ambulance	911
Hospital (Stouder Memorial Hospital)(1)	(513) 332-8500
Ohio DOH	(614) 221-1265
Ohio EPA (Southwest District Office)	(513) 285-6357
Poison Control Center	(800) 962-1253
USEPA National Response Center	(800) 424-8802
State Highway Patrol	(513) 335-6008
Miami County Health Department	(513) 335-5675
Pollution Emergency Alert System (PEAS)	(800) 292-4706
USEPA On-Scene Coordinator (Anita Boseman)	(312) 886-6941

(1) Directions to Stouder Memorial Hospital from the United Lead Scrap Site:

From the Site, turn right onto South County Road 25A and travel in a northerly direction along South County Road 25A for approximately 1.8 miles. Then turn left onto Market Street at the traffic lights and travel in a westerly direction for approximately 0.5 miles and turn right onto Ridge Street. Travel approximately 0.3 miles in a northerly direction along Ridge Street and turn left into the hospital, following the hospital signs.



SOURCE: USGS QUADRANGLE MAP TROY, OHIO



CRA

figure A.1
EMERGENCY HOSPITAL ROUTE
UNITED SCRAP LEAD SITE
Troy, Ohio

A.13.0**EMERGENCY AND FIRST AID EQUIPMENT**

Emergency safety equipment will be available for use by Site personnel and will be located and maintained on Site. The safety equipment will include, but is not limited to, the following:

- i) portable emergency eye wash;
- ii) two 20-pound ABC type dry chemical fire extinguishers;
- iii) approved first-aid kit for a minimum of 10 personnel;
- iv) fire blanket; and
- v) portable air horn.

A.14.0 EMERGENCY RESPONSE PLAN

Prior to commencing work, the SSO and the OSC will coordinate the development of an emergency contingency plan. The plan is intended to provide immediate response to a serious Site occurrence such as injury, explosion or fire.

In the event of injury to on-Site personnel, the following protocol will be followed:

- i) activate Site Alarm (three short blasts on air horn);
- ii) notify the SSO and the OSC within 24 hours;
- iii) contact the designated hospital and describe the injury;
- iv) administer appropriate first aid; and
- v) transport personnel to the medical facility along a predefined route.

In the event of a significant release of toxic or hazardous vapors, the source of such vapors shall be immediately isolated, the material identified and the SSO notified. If possible, the source of the vapors shall be controlled. Appropriate regulatory and emergency agencies will be notified of the situation. A list of the phone numbers for each agency is presented in Table A-3 which will be prominently posted in each employer's vehicles.

A.15.0**EQUIPMENT AND PERSONNEL DECONTAMINATION**

During the fence installation program, procedures will be implemented to reduce the amount of contact of both personnel and equipment with potential waste constituents. These procedures include the following:

- i) proper work practices that would lead to minimal direct contact with potentially contaminated soils;
- ii) use of disposable equipment and/or PPE; and
- iii) remove disposable PPE prior to leaving the Site.

Used PPE will be removed and secured on Site, for disposal off Site on completion of the fencing installation. Equipment used on Site will be water washed on polyethylene sheeting to remove visible soils, prior to leaving the Site. The wash water will be collected for disposal off Site on completion of the fencing activities.

A.16.0 CONTAMINATION MIGRATION CONTROL

All vehicles and equipment used within the CRZ will not be permitted to enter the EZ.

ATTACHMENT A-1

EMPLOYER'S SITE-SPECIFIC HEALTH AND SAFETY PLAN

Fill in the blanks and attach supporting documents as necessary.

Industrial Hygiene: _____
Date: _____
Site Engineer: _____
Site Safety Officer: _____

10. Anticipated Weather: temperature ranging from 0°F to 50°F, possibility of rain and snow (temperature etc.)
11. Limiting Weather: (by which the job will be stopped) lightning, high winds
12. Unusual Features: used battery casing stockpiles on Site

B. Hazard Description

1. Initial Site Safety Assessment Review Complete (X) Partial ()
If partial, why? Attach Initial Review to Addendum
2. Hazard level: A () B () C () Modified D (X) Unknown ()
Who determined the hazard level? How? USEPA and CRA, based on data from previous activities completed at the Site.

If hazard level exceeds level C attach an additional sheet with explanation/justification.

3. Types of hazards:
- | | | | | | |
|-------------|-------|--------------|-------|----------------|-------|
| Chemical | (X) | Inhalation | (X) | Cold Stress | () |
| Biological | (X) | Ingestion | (X) | Heat Stress | () |
| Physical | () | Skin Contact | () | Noise | () |
| Radiation | () | | | Confined Space | |
| Oxygen Def. | () | | | Entry | () |
| Explosive | () | | | | |

Describe

4. Source of Hazard:

() Air

Describe: potentially lead contaminated dust in air during excavation activities.

() Soil

Describe: lead contaminated soils

() Surface Water

Describe:

4. Source of Hazard: (continued)

() Groundwater

Describe:

() Other

Describe:

5. Chemical and Physical Hazards of Concern

List the primary, identifiable, chemical and physical hazards.

Name	Concentrations (if known)	Primary Hazards	MSDS ⁽¹⁾ attached?
Lead	less than 500 mg/kg in CRZ	blood and central	yes
	greater than 500 mg/kg in EZ	nervous system	
rubber and plastic	N/A	cuts, etc.	N/A
batteries casing			
liquid battery acid	Not in CRZ	acid burns	N/A
		any physical contact	

Note: (1) MSDS = Material Safety Data Sheet

C. Personnel Protective Equipment

1. Level of Protection

Location	Job-Task	Level of Protection
Site boundary	Surveying of legal boundaries of the Site	D
	Perimeter Fencing	
Site boundary	- grubbing and clearing	Modified D
Site boundary	- drilling of post holes	Modified D
Site boundary	- fence installation	Modified D
On Site	- stockpiling of vegetation and debris	Modified D

2. Protective Equipment - Modified Level D - All clearing and grubbing and fence installation activities in CRZ/SZ

Respiratory N/A

Clothing () N/A

- (X) Tyvek Coverall, Standard
() Tyvek Coverall, Polyethylene
() Tyvek Coverall, Saranex
() Coverall

Head, Eye Ear Protection () N/A

Hand Protection () N/A

- (X) Hard Hat
() Goggles
(X) Safety Glasses/w Sideshields
() Chemical Goggles
() Ear Muffs or Plugs
() Other
-

- () Undergloves

Type _____

- (X) Gloves

Type: Nitrile

- () Overgloves

Type _____

- () Other
-

Foot Protection () N/A

- (X) Safety shoes
(X) Disposable Overboots
() Other
-

D. PERSONAL AIR MONITORING

- Clearing and grubbing, augering of fence post holes and fence installation activities only

Depending on the thoroughness of the Initial Site Survey and the hazard levels resulting from the survey, supplemental breathing zone air monitoring beyond that specified below, may be necessary to protect the health of site workers and verify the level of protection employees are utilizing. Applicability of this section is subject to Industrial Hygiene review.

Equipment**Frequency**

HNU/OVA

Combustible Gas Indicator

Oxygen Monitor

Colorimetric Tubes
(state type)

Other

Real Time Air Monitor
(For Total Dust Monitoring)Daily

Other

E. ENVIRONMENTAL MONITORING REQUIREMENTS

Supplemental environmental site monitoring, beyond that in D, above, may or may not be necessary during the course of this investigation depending on the complexity of the site and the nearest residents.

F. PERSONNEL DECONTAMINATION

Attach diagram if required.

☒ Required for clearing and grubbing, and fencing

☒ Not required for surveying

Prior to leaving the Site, disposable PPE will be removed and secured, and hands and face will be washed.

G. EQUIPMENT DECONTAMINATION

☐ Required

☐ Not required

Water washing of equipment to remove visible soils prior to leaving the Site.

H. PERSONNEL

All on-Site personnel are required to participate in training and medical management programs prior to field assignment and annually thereafter. Original copies of physical exams and training certifications are to be kept on file. All personnel entering the Site to actively work on installation of fence posts must be tested for blood lead-levels prior to entering the Site, and on completion of all fence post installation activities at the Site.

PERSONNEL AUTHORIZED TO ENTER THE SITE

<i>Name</i>	<i>Work Location Title/Task</i>	<i>Medical Current</i>	<i>Fit Test Current</i>	<i>Training Current</i>	<i>Blood Tests</i>	
					<i>Pre</i>	<i>Post</i>
_____		()	()	()	()	()
_____		()	()	()	()	()
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Site Safety Coordinator _____

I. ACTIVITIES COVERED UNDER THIS PLAN
--

Task No.	Description	Preliminary Schedule
1.	Surveying of and setting out the legal boundaries of the Site.	January 1992
2.	Construction of perimeter fence, including - clearing and grubbing - drilling of post holes - fence installation - stockpiling of vegetation on Site and disposal of debris off Site - off-Site disposal of decontamination water, used PPE and existing fence	January 1992/February 1992

J. CONTINGENCY CONTACTS

<i>Agency</i>	<i>Phone #</i>
General Emergency (Sheriff's Dept.)	911
Ambulance	911
Hospital (Stouder Memorial Hospital)	(513) 332-8500
Ohio DOH	(614) 221-1265
Ohio EPA (Southwest District Office)	(513) 285-6357
Poison Control Center	(800) 962-1253
USEPA National Response Center	(800) 424-8802
State Highway Patrol	(513) 335-6008
Miami County Health Department	(513) 335-5675
Pollution Emergency Alert System (PEAS)	(800) 292-4706
USEPA On-Scene Coordinator (Anita Boseman)	(312) 886-6941
CRA Industrial Hygiene (Mitchel S. Bergner, CIHROH)	(612) 639-0913

K. CONTINGENCY PLANS

attach additional information

ALL EMERGENCY ACTIONS AT TO BE REPORTED TO CRA INDUSTRIAL HYGIENE
AS SOON AS POSSIBLE

Medical Emergency

Name of Hospital:

STOUDER MEMORIAL HOSPITAL

Address:

920 Summit Ave. Troy

Phone No.:

(513) 332-8500

Name of Contact:

Dr. Kaz (Chief of Emergency Medicine) or Duty Doctor

Address:

920 Summit Ave. Troy

Phone No.:

(513) 332-8500

Route to Hospital (see Figure A.1)

From the Site, turn right onto South County Road 25A and travel in a northerly direction along South County Road 25A for approximately 1.8 miles. Then turn left onto Market Street at the traffic lights and travel in a westerly direction for approximately 0.5 miles and turn right onto Ridge Street. Travel approximately 0.3 miles in a northerly direction along Ridge Street and turn left into the hospital, following the hospital signs.

Travel Time
from Site (min.)

Approximately 10 minutes

Distance to
Hospital

Approximately 3 miles

Name/Number 24 Hr. Ambulance Service

Stouder Memorial Hospital
911 or (513) 332-8500

ADDENDUM TO SITE SAFETY PLAN

- () SITE/PROJECT HISTORY**
- () INITIAL SITE ASSESSMENT**
- () PROTECTION OF NEIGHBORING PROPERTIES**
- () HAZARD LEVEL A, B OR C JUSTIFICATION**
- (X) MATERIAL SAFETY DATA SHEETS**
- () PERSONAL AIR SAMPLING PROGRAM**
- () DECONTAMINATION SAMPLING PROGRAM**
- () DECONTAMINATION PROCEDURES/ZONE MAP**
- () ADDITIONAL CONTINGENCY PLANS**
- () OTHER**

Material Safety Data Sheet

Genium Publishing Corporation
1145 Catalyn Street, Schenectady, NY 12303
(518) 377-8854
From Genium's collection, to be used as reference

Product: LEAD (INORGANIC)

MSDS No: Genium / 713

Date: August, 1990

National Paint
and Coatings
Association

Hazardous Material
Identification
System

HEALTH HAZARD	3 - Serious
FLAMMABILITY HAZARD	1 - Slight
REACTIVITY HAZARD	0 - Minimal
PERSONAL PROTECTION	SEE SECTION 8

SECTION I. MATERIAL IDENTIFICATION

Trade/Material Name: LEAD (INORGANIC)

Description: Exists widely throughout the world in a number of ores. Its main commercial source is galena (lead sulphide). Lead mineral is separated from crude ores by blast-furnace smelting, dressing, or electrolytic refining. Lead is used mostly in manufacturing storage batteries. Other uses are in manufacturing tetraethyl lead and both organic and inorganic lead compounds in ceramics, plastics, and electronic devices; in producing ammunition, and solder.*

Other Designations: Pb; lead oxide; lead salts, inorganic; metallic lead; plumbum.

CAS: 7439-92-1

R 0
I 4
S -
K 0

Manufacturer: Contact your supplier or distributor. Consult the latest Chemicalweek Buyers' Guide⁽⁷³⁾ for suppliers list.

Cautions: Inorganic lead is a potent systemic poison. Organic lead (e.g., tetraethyl lead) has severe, but different, health effects. Occupational lead poisoning is due to dust and fumes inhalation. Major affected organ systems are the nervous, blood, and reproductive systems, and kidneys. Health impairment or disease may result from a severe acute short- or long-term exposure.

* Used to produce cable covering, sheet lead, and other metal product (brass, pipes, caulking); in metallurgy; in weights and as ballast; a chemical intermediate for lead alkyls and pigments; a construction material for tank linings, piping, and equipment used to handle corrosive gases and liquids used to manufacture sulfuric acid, petroleum refining, halogenation, sulfonation, extraction, and condensation; and for x-ray and atomic radiation protection.

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SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name:	CAS Number:	Percent:	Exposure Limits:
Lead (inorganic) fumes and dusts, as Pb	7439-92-1	ca 100	<u>1990 OSHA PELs</u> <u>(Lead, inorganic</u> <u>compounds)</u> 8-hr TWA: 50 $\mu\text{g}/\text{m}^3$ Action Level TWA*: 30 $\mu\text{g}/\text{m}^3$ <u>1989-90 ACGIH TLV</u> <u>(Lead, inorganic,</u> <u>fumes and dusts)</u> TLV-TWA: 150 $\mu\text{g}/\text{m}^3$ 1988 NIOSH REL 10-hr TWA: <100 $\mu\text{g}/\text{m}^3$ 1985-86 Toxicity Data** Human, inhalation, TC _{Lo} : 10 $\mu\text{g}/\text{m}^3$ affects gastrointestinal tract and liver Human, oral, TD _{Lo} : 450 mg/kg ingested over 6 yr affects peripheral and central nervous systems. Rat, oral, TD _{Lo} : 790 mg/kg affects multigeneration reproduction <u>1988 NIOSH REL</u> <u>10-hr TWA: <100</u> <u>$\mu\text{g}/\text{m}^3$</u> <u>29 CFR 1910.1025</u> <u>Lead Standard</u> Blood Lead Level: 40 $\mu\text{g}/100\text{ g}$

* Action level applies to employee exposure without regard to respirator use.

** See NIOSH, NIH (OF7525000), for additional mutative, reproductive, and toxicity data.

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SECTION III. PHYSICAL DATA

Appearance & Odor: Bluish-white, silvery, gray, very soft metal.

Boiling point: 3164°F (1740°C)	Specific gravity (H ₂ O=1): 11.34
Vapor pressure: 1.77 mm Hg at 1832°F (1000°C)	Melting point: 621.3°F (327.4°C)
Water solubility (%): Relatively insoluble in hot or cold water*	Molecular weight: 207.20

Viscosity: 3.2 cp at 621.3° (327.4°C)

* Lead dissolves more easily at a low pH.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point (method): None reported Limits: LEL %: None reported UEL %: None reported

NFPA Fire Hazard Symbol Codes: Flammability: 1 Health: 3 Reactivity: 0 Special: --

Extinguishing Media: Use dry chemical, carbon dioxide, water spray, or foam to extinguish fire. Autoignition Temp: None reported

Unusual fire or explosion hazards: Flammable and moderately explosive in the form of dust when exposed to heat or flame.

Special fire-fighting procedures: Isolate hazard area and deny entry. Since fire may produce toxic fumes, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in the pressure-demand or positive-pressure mode and full protective equipment. Be aware of runoff from fire control methods. Do not release to sewers or waterways.

* Genium determined these hazard values because the NFPA Guidebook did not.

SECTION V. REACTIVITY DATA

Chemical incompatibilities: Mixtures of hydrogen peroxide + trioxane explode on contact with lead. Lead is incompatible with sodium azide, zirconium, disodium acetylide, and oxidants. A violent reaction on ignition may occur with concentrated hydrogen peroxide, chlorine trifluoride, sodium acetylide, (with powdered lead), ammonium nitrate (below 200°C with powdered lead). Lead is attacked by pure water and weak organic acids in the presence of oxygen. Lead is resistant to tap water, hydrofluoric acid, brine, and solvents.

Conditions to avoid: Rubber gloves containing lead may ignite in nitric acid.

Hazardous decomposition Products: Thermal oxidative decomposition of lead can produce highly toxic fumes of lead.

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Date: August, 1990

REACTIVITY DATA continued from page 3

Stability/Polymerization: Lead is stable at room temperature in closed containers under normal storage and handling conditions. It tarnishes on exposure to air. Hazardous polymerization cannot occur.

SECTION VI. HEALTH HAZARD INFORMATION

Summary of risks: Lead is a potent, systemic poison that affects a variety of organ systems, including the nervous system, kidneys, reproductive system, blood formation, and gastrointestinal (GI) system. The most important way lead enters the body is through inhalation, but it can also be ingested when lead dust or unwashed hands contaminate food, drink, or cigarettes. Much of ingested lead passes through feces without absorption into the body. Adults may absorb only 5 to 15% of ingested lead; children may absorb a much larger fraction. Once in the body, lead enters the bloodstream and circulates to various organs. Lead concentrates and remains in bone for many years. The amount of lead the body stores increases as exposure continues, with possibly cumulative effects. Depending on the dose entering the body, lead can be deadly within several days or affect health after many years. Very high doses can cause brain damage (encephalopathy).

Medical conditions which may be aggravated by contact: Lead may aggravate nervous system disorders (e.g., epilepsy, neuropathies), kidney diseases, high blood pressure (hypertension), infertility, and anemia. Lead-induced anemia and its effect on blood pressure can aggravate cardiovascular disease.

Target organs: Blood, central and peripheral nervous systems, kidneys, and gastrointestinal (GI) tract.

Primary entry route(s): Inhalation, ingestion.

Acute effects: An acute, short-term dose of lead could cause acute encephalopathy with seizures, coma, and, rarely, death. Reversible kidney damage can occur from acute exposure, as well as anemia.

Chronic effect(s): Symptoms of chronic long-term overexposure include appetite loss, nausea, metallic taste in the mouth, lead line on gingival (gum) tissue, constipation, anxiety, anemia, pallor of the face and the eye grounds, excessive tiredness, weakness, insomnia, headache, nervous irritability, fine tremors, numbness, muscle and joint pain, and colic accompanied by severe abdominal pain. Paralysis of the wrist's and, less often, the ankle's extensor muscles may occur after years of increased lead absorption. Kidney disease may also result from chronic overexposure, but few, if any, symptoms appear until severe kidney damage has occurred. Reproductive damage is characterized by decreased sex drive, impotence, and sterility in men; and decreased fertility, abnormal menstrual cycles, and miscarriages in women. Unborn children may suffer neurologic damage or developmental problems due to excessive lead exposure in pregnant women. Lead poisoning's severest result is encephalopathy manifested by severe headache, convulsions, coma, delirium, and possibly death.

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Date: August, 1990

HEALTH HAZARD INFORMATION continued from page 4

First aid:

Eye contact: Gently lift the eyelids and flush immediately and continuously with flooding amounts of water until transported to an emergency medical facility. Consult a physician immediately.

Skin contact: Quickly remove contaminated clothing. Rinse with flooding amounts of water for at least 15 min. Consult a physician if any health complaints develop.

Inhalation: Remove exposed person to fresh air and support breathing as needed. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious or convulsing person. If large amounts of lead were ingested, induce vomiting with Ipecac syrup. Consult a physician immediately.

Carcinogenicity: Although the NTP and OSHA do not list lead as a carcinogen, IARC lists it as probably carcinogenic to humans, but having (usually) no human evidence. However, the literature reports instances of lead-induced neoplasms, both benign and malignant, of the kidney and other organs in laboratory rodents. Excessive exposure to lead has resulted in neurologic disorders in infants. Experimental studies show lead has reproductive and teratogenic effects in laboratory animals. Human male and female reproductive effects are also documented.

Physician's Note: For diagnosis, obtain blood pressure, blood lead level (PbB), zinc protoporphyrin (ZPP), complete blood count for microcytic anemia and basophilic stippling, urinalysis, and blood urea nitrogen (BUN) of creatinine. Examine peripheral motor neuropathy, pallor, and gingival lead line. Use Ca-EDTA to treat poison, but never chelate prophylactically. Consult an occupational physician or toxicologist.

SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES

Spill / Leak procedures: Notify safety personnel and evacuate all unnecessary personnel immediately. Cleanup personnel should protect against inhalation of dusts or fume and contact with skin or eyes. Avoid creating dusty conditions. Water sprays may be used in large quantities to prevent the formation of dust. Cleanup methods such as vacuuming (with an appropriate filter) or wet mopping minimizes dust dispersion. Scoop the spilled material into closed containers for disposal or reclamation. Follow applicable OSHA regulations (29 CFR 1910.120)

Waste management / Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

OSHA Designations
Listed as an Air Contaminant (29 CFR 1910.1000, Table Z-1-A)
EPA Designations

Material Safety Data Sheet

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Product: LEAD (INORGANIC)

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Date: August, 1990

SPILL, LEAK AND DISPOSAL PROCEDURES continued from page 5

Listed as a RCRA Hazardous Waste (40 CFR 261.33, Appendix II--EP Toxicity Test Procedures)
Listed as a CERCLA Hazardous Substance* (40 CFR 302.4), Reportable Quantity (RQ): 1 lb (0.454 kg) [* per Clean Water Act, Sec. 307(a)]
SARA Extremely Hazardous Substance (40 CFR 355): Not listed
Listed as a SARA Toxic Chemical (40 CFR 372.65)

SECTION VIII. SPECIAL PROTECTION INFORMATION

Personal protective equipment:

Goggles: Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133).

Respirator: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a NIOSH-approved respirator. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Other: Wear impervious gloves, boots, aprons, and gauntlets to prevent skin contact. Protective clothing made of man-made fibers and lacking turn-ups, pleats, or pockets retain less dust from lead.

Workplace considerations:

Ventilation: Provide general and local explosion-proof ventilation systems to maintain airborne concentrations below the OSHA PELs (Sec. 2). Local exhaust ventilation is preferred since it prevents contaminant dispersion into the work area by controlling it at its source.
(103)

Safety stations:

Make available in the work area emergency eyewash stations, safety/quick-drench showers, and washing facilities.

Contaminated equipment:

Never wear contact lenses in the work area: soft lenses may absorb, and all lenses concentrate, irritants. Launder contaminated clothing before wearing. Remove this material from your shoes and equipment.

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

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Date: August, 1990

SECTION IX. SPECIAL PRECAUTIONS

Storage segregation: Store in tightly closed containers in a cool, dry, well-ventilated area away from all incompatible materials, direct sunlight, and heat and ignition sources.

Engineering controls: Educate worker about lead's hazards. Follow and inform employees of the lead standard (29 CFR 1910.1025). Avoid inhalation of lead dust and fumes and ingestion of lead. Use only with appropriate personal protective gear and adequate ventilation. Institute a respiratory protection program that includes regular training, maintenance, inspection, and evaluation. Avoid creating dusty conditions. Segregate and launder contaminated clothing. Take precautions to protect laundry personnel. Practice good personal hygiene and housekeeping procedures. For a variety of reasons, the lead concentration in workroom air may not correlate with the blood lead levels in individuals.

Other precautions: Provide preplacement and periodic medical examinations emphasizing blood, nervous system, gastrointestinal tract, and kidneys, including complete blood count and urinalysis. Receive a complete history including previous surgeries and hospitalization, allergies, smoking history, alcohol consumption, proprietary drug intake, and occupational and nonoccupational lead exposure. Maintain records for medical surveillance, airborne exposure monitoring, employee complaints, and physician's written opinions for 40 years or duration of employment plus 20 years. Measurement of blood lead level (PbB) and zinc protoporphyrin (ZPP) are useful indicators of your body's lead absorption level. Maintain worker PbBs at or below 40 µg/100 g of whole blood.

Transportation Data (49 CFR 172.102)

IMO Shipping Name Lead compounds, soluble, n.o.s.

IMO Hazard Class: 6.1

ID No.: UN2291

IMO Label: St. Andrews Cross (X, Stow away from foodstuffs)

IMDG Packaging Group: III

* To minimize adverse reproductive health effects to parents and developing fetus, maintain the PbBs of workers intending to have children below 30 µg/100 g. Elevated PbBs increase your risk of disease, and the longer you have elevated PbBs, the greater your chance of substantial permanent damage.

Data source code(s): 26, 38, 73, 84, 85, 88, 89, 90, 100, 101, 103, 109, 124, 126, 132, 133, 134, 136, 138, 139, 142, 143

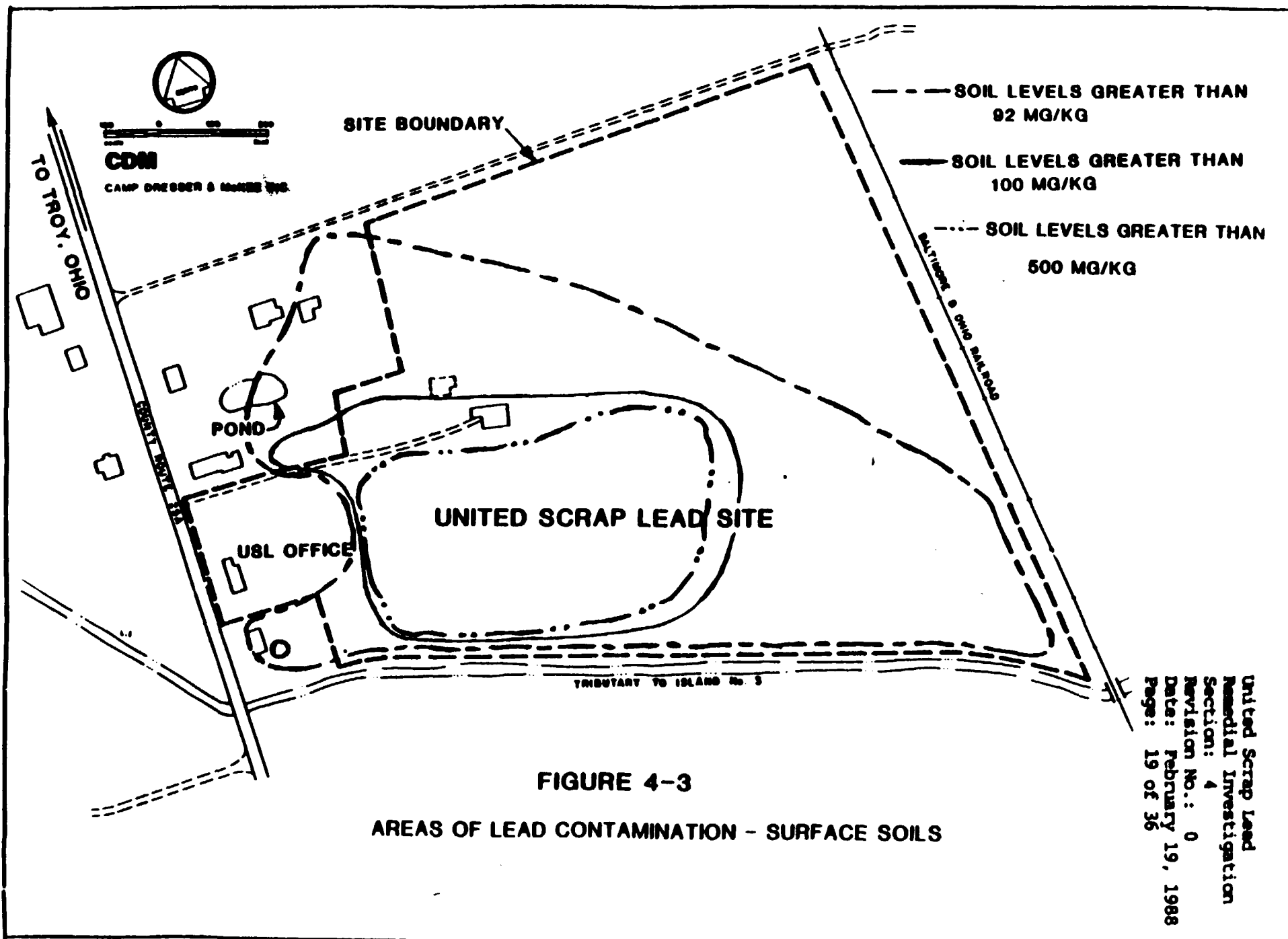
Prepared/revised by: MJ Allison, BS

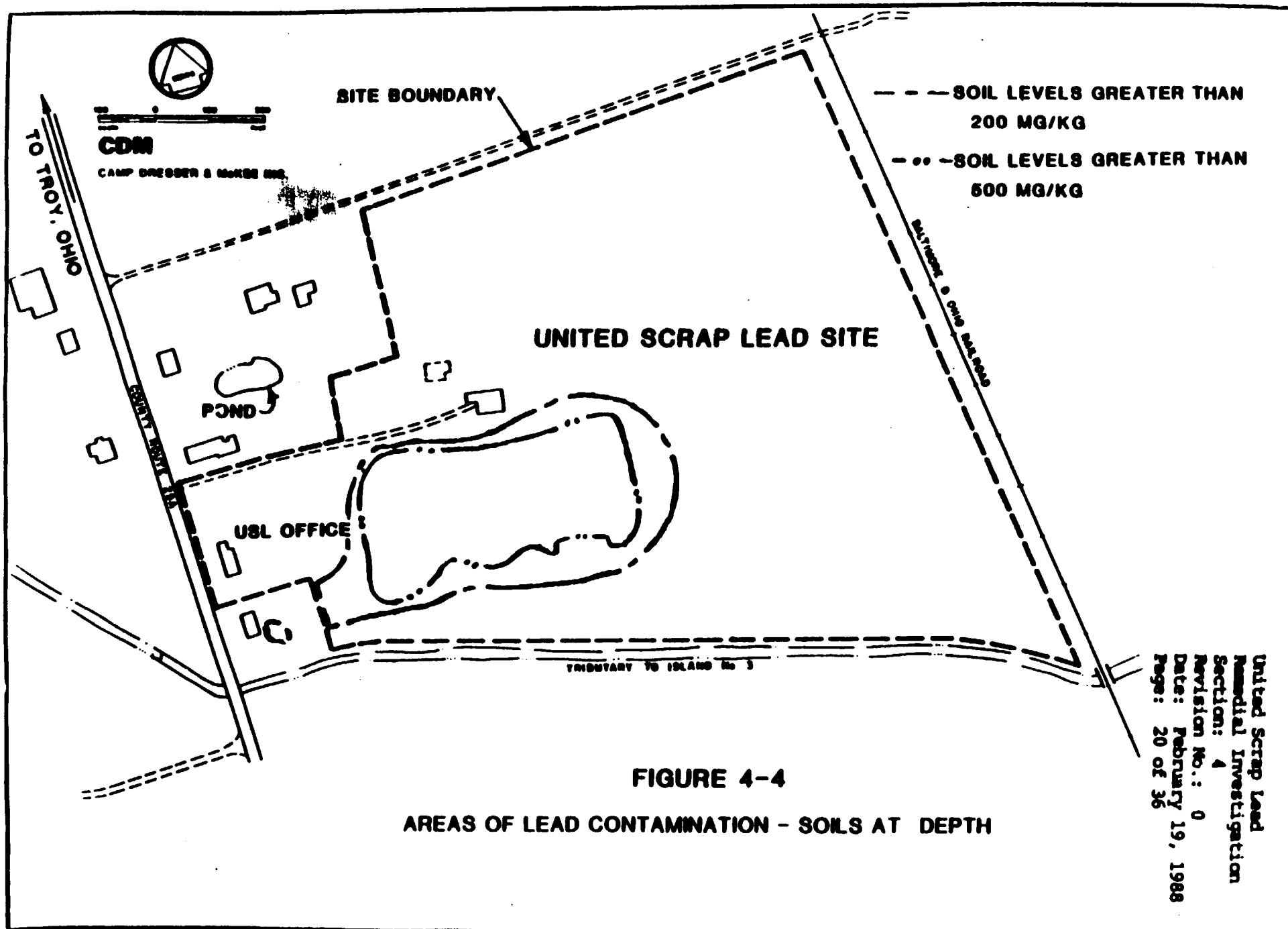
August, 1990

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ATTACHMENT A-2

FIGURES 4.3 AND 4.4 OF RI REPORT





ATTACHMENT A-3
TRAINING ACKNOWLEDGEMENT FORM

UNITED SCRAP LEAD SITE
TROY, OHIO

TRAINING ACKNOWLEDGEMENT FORM

Please Print:

NAME: _____

ADDRESS: _____

SOCIAL SECURITY NUMBER: _____

EMPLOYER: _____

JOB SITE: UNITED SCRAP LEAD SITE (SITE)
TROY, MIAMI COUNTY, OHIO

WORK ACTIVITIES: SURVEYING, CLEARING AND GRUBBING, FENCE
INSTALLATION

I have attended and understood the mandatory Site-specific initiation session for the above-referenced job site. This program referenced the following topics:

- i) known potential hazards on Site;
- ii) level of personal protection equipment required;
- iii) emergency procedures for the Site; and
- iv) the basics of the Site-specific Health and Safety Plan.

I further confirm that I have the required 40 hours of training to comply with 29 CFR 1910.120, have a respirator for which I have been fit tested, and have had blood lead level and zinc protoporphyrin tests prior to commencing work at the Site.

Date

Signature