F.6 C&D Power Erie Co

NUS CORPORATION

POTENTIAL HAZARDOUS WASTE SITE

PRELIMINARY ASSESSMENT

02-8710-93-PA
Rev. No. 0

C&D Power Systems
Site Name

NYD085686426
EPA Site ID Number

45 Scoville Avenue
Buffalo, New York
Address

02-8710-93
TDD Number

Date of Site Visit: No off-site reconnaissance conducted.

SITE DESCRIPTION

The C&D Power Systems Site was utilized as a lead acid battery sales and service center from 1969 to 1985. It is a 0.25-acre site located on Scoville Avenue in Buffalo, Erie County, New York. The site consists of a shop building with a 20 foot by 40 foot outdoor concrete pad behind it. The outer edge of the pad is approximately 6 feet from the rear property line. Adjacent to the site is a residential area and north of the site is an open field. The area is not fenced. Past plant operations included the storage and washing of batteries on the concrete pad. There are no known waste containment methods. Surficial soil sampling was conducted in August 1985 by ERM-Northeast for C&D Power Systems. Lead concentrations ranging from 160 to 40,000 ppm were detected both on and off site. Presently, a soil and groundwater sampling work plan is being developed by C&D Power Systems for the New York State Department of Environmental Conservation. Groundwater and surface water are not used for drinking purposes.

PRIORITY FOR FURTHER ACTION: High __ Medium X No Further Action __

RECOMMENDATIONS

A medium priority for further action is recommended for this site in order to determine the extent of off-site soil contamination. Also, public access to the site should be secured to prevent further contamination of the surrounding population.

Prepared by: Donna J. Restivo
of NUS Corporation

Date: December 4, 1987

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	0035686426

II. SITE NAME AND LOCATION

01 SITE NAME *(Legal, common, or descriptive name of site)*	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
C&D Power Systems	45 Scoville Avenue

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Buffalo	NY	14206	Erie	029	33

09 COORDINATES LATITUDE	LONGITUDE
42° 52' 30" N	078° 49' 50" W

10 DIRECTIONS TO SITE *(Starting from nearest public road)*

Take Route 190 to exit N3 (Rte. 62). Follow Rte. 62 North to Clinton Street. Take a left onto Clinton St. and follow for 5 blocks to Scoville Avenue.

III. RESPONSIBLE PARTIES

01 OWNER *(if known)*	02 STREET *(Business, mailing, residential)*
C&D Power Systems	3043 Walton Road

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Plymouth Meeting	PA	19462	(215) 828-9000

07 OPERATOR *(if known and different from owner)*	08 STREET *(Business, mailing, residential)*

09 CITY	04 STATE	11 ZIP CODE	12 TELEPHONE NUMBER

13. TYPE OF OWNERSHIP *(Check one)*

x A. PRIVATE _ B. FEDERAL: _____ *(Agency name)* _ C. STATE _ D. COUNTY _ E. MUNICIPAL

_ F. OTHER: _____ *(Specify)* _ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE *(Check all that apply)*

_ A. RCRA 3001 DATE RECEIVED: _____ MONTH DAY YEAR _ B. UNCONTROLLED WASTE SITE *(CERCLA 103c)* DATE RECEIVED: _____ MONTH DAY YEAR xC. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01. ON SITE INSPECTION

x YES DATE: 8/85 MONTH DAY YEAR

_ NO

BY *(Check all that apply)*

_ A. EPA _ B. EPA CONTRACTOR _ C. STATE x D. OTHER CONTRACTOR

_ E. LOCAL HEALTH OFFICIAL _ F. OTHER: _____ *(Specify)*

CONTRACTOR NAME(S): EMR-Northeast

02 SITE STATUS *(Check one)*

_ A. ACTIVE x B. INACTIVE _ C. UNKNOWN

03 YEARS OF OPERATION

1969 BEGINNING YEAR / 1985 ENDING YEAR _ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Lead had been discovered in soil samples both on and off site.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

There is a potential for population exposure due to direct contact.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION *(Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)*

_ A. HIGH *(Inspection required promptly)* x B. MEDIUM *(Inspection required)* _ C. LOW *(Inspect on time available basis)* _ D. NONE *(No further action needed, complete current disposition form)*

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF *(Agency/Organization)*	08 TELEPHONE NUMBER
Diana Messina	U.S. EPA, Region 2, Edison, New Jersey	(201) 321-6776

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Donna Restivo	U.S. EPA	NUS Corp., FIT 2	(201) 225-6160	12/4/87

EPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	0085686426

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

_ A. SOLID
_ B. POWDER, FINES
_ C. SLUDGE
_ D. OTHER _____ *(SPECIFY)*
_ E. SLURRY
X F. LIQUID
_ G. GAS

02 WASTE QUANTITY AT SITE *(Measures of waste quantities must be independent)*

TONS _____
CUBIC YARDS Unknown
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

X A. TOXIC
_ B. CORROSIVE
_ C. RADIOACTIVE
_ D. PERSISTENT
_ E. SOLUBLE
_ F. INFECTIOUS
_ G. FLAMMABLE
_ H. IGNITABLE
_ I. HIGHLY VOLATILE
_ J. EXPLOSIVE
_ K. REACTIVE
_ L. INCOMPATIBLE
_ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	160-40,000	ppm	

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Lead	7439-92-1	Unknown	160-40,000	ppm

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references, e.g. state files, sample analysis, reports)*

Letter from Pamela J. Reich, Allied C&D Power Systems, to the Division of Solid Waste, New York Department of Environmental Conservation, January 7, 1986.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: D085686426

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 x A. GROUNDWATER CONTAMINATION — 02 _ OBSERVED (DATE: _____) x POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

The potential for groundwater contamination does exist due to material dumped on site. The depth to groundwater is 5 feet, however, groundwater is not used for drinking purposes.

01 x B. SURFACE WATER CONTAMINATION — 02 _ OBSERVED (DATE: _____) x POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown — 04 NARRATIVE DESCRIPTION

The potential for surface water contamination does exist. Material dumped on site may migrate to the Buffalo River, which is downgradient from the site. There are no intakes within 3 miles.

01 _ C. CONTAMINATION OF AIR — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for contamination of air does not exist as the site is inactive and lead is not volatile.

01 _ D. FIRE/EXPLOSIVE CONDITIONS — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for fire/explosive conditions does not exist as the site is inactive, and lead is not flammable.

01 x E. DIRECT CONTACT — 02 _ OBSERVED (DATE: _____) x POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 9,038 — 04 NARRATIVE DESCRIPTION

The potential exists for direct contact due to lead-contaminated soil on and off the site. The site is unfenced.

01 x F. CONTAMINATION OF SOIL — 02 x OBSERVED (DATE: 3/85) _ POTENTIAL _ ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown (Acres) — 04 NARRATIVE DESCRIPTION

Lead was discovered in soil samples around a concrete pad behind the C&D Power Systems Shop Building as well as at residential properties offsite. Total lead concentrations in the samples ranged from 160 to 40,000 ppm.

01 _ G. DRINKING WATER CONTAMINATION — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. There are no surface water intakes within 3 miles and groundwater is not used for drinking purposes. Drinking water is from the Niagara River, approximately 5 miles away.

01 _ H. WORKER EXPOSURE/INJURY — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for worker exposure/injury does not exist as the site is inactive.

01 x I. POPULATION EXPOSURE/INJURY — 02 _ OBSERVED (DATE: _____) x POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 9,038 — 04 NARRATIVE DESCRIPTION

There is potential for population exposure/injury resulting from direct contact.

EPA POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: 0085686426

II. HAZARDOUS CONDITIONS AND INCIDENTS *(CONTINUED)*

01 x J. DAMAGE TO FLORA — 02 _ OBSERVED (DATE: _____) — x POTENTIAL — _ ALLEGED

04 NARRATIVE DESCRIPTION

The potential for damage to flora does exist due to the lead-contaminated soil on and off site.

01 x K. DAMAGE TO FAUNA — 02 _ OBSERVED (DATE: _____) — x POTENTIAL — _ ALLEGED

04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

The potential for damage to fauna does exist due to the lead-contaminated soil on and off site.

01 x L. CONTAMINATION OF FOOD CHAIN — 02 _ OBSERVED (DATE: _____) — x POTENTIAL — _ ALLEGED

04 NARRATIVE DESCRIPTION

The potential for contamination of the food chain does exist due to the lead dumped on site. Lead is bioaccumulative.

01 x M. UNSTABLE CONTAINMENT OF WASTES *(Spills, Runoff, Standing liquids, Leaking drums)* — 02 x OBSERVED (DATE: 9/85) — _ POTENTIAL — _ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 9,038

04 NARRATIVE DESCRIPTION

Lead was discovered in soil samples taken from residential properties adjacent to the C&D Power Systems property as well as around a concrete pad behind the C&D Shop building.

01 x N. DAMAGE TO OFFSITE PROPERTY — 02 x OBSERVED (DATE: 9/85) — _ POTENTIAL — _ ALLEGED

04 NARRATIVE DESCRIPTION

Lead was discovered in soil samples taken from residential properties adjacent to the C&D Power Systems property. All lead concentrations were above local background levels.

01 x O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 _ OBSERVED (DATE: _____) — x POTENTIAL — _ ALLEGED

04 NARRATIVE DESCRIPTION

The potential for contamination of sewers or storm drains does exist due to lead from the soil being washed into the system.

01 x P. ILLEGAL/UNAUTHORIZED DUMPING — 02 x OBSERVED (DATE: 8/85) — _ POTENTIAL — _ ALLEGED

04 NARRATIVE DESCRIPTION

C&D Power Systems washed industrial batteries on an outdoor concrete pad at the rear of the facility. Soil samples from the site indicate the presence of lead.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

There are no other known, potential, or alleged hazards.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 9,038

IV. COMMENTS

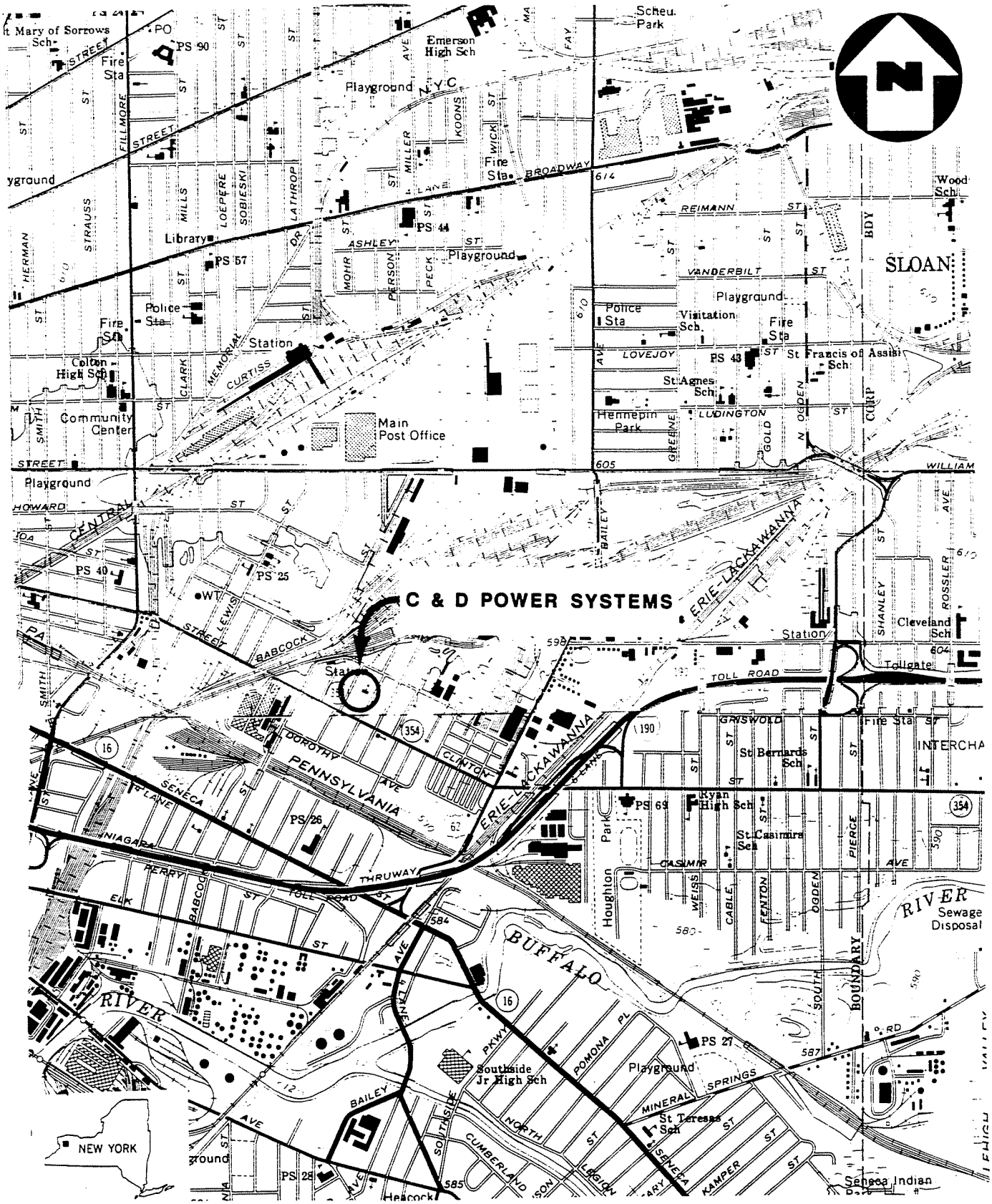
No off-site reconnaissance was conducted, therefore, no photographs are available

V. SOURCES OF INFORMATION *(Cite specific references, e.g. state files, sample analysis, reports)*

Letter from Pamela J. Reich, Allied C&D Power Systems, to the Division of Solid Waste, New York Department of Environmental Conservation, January 7, 1986.// General Science Corp., Graphical Exposure Model Systems (GEMS). Landover, Maryland, 1986.// New York State Department of Environmental Conservation Memoranda from John Tygert to Charles Goddard, March 30, 1987.// Telecon note: Robert Fuller, Erie County Health Dept., and Denise Horgan, NUS Corp., February 13, 1987.

APPENDIX A

MAPS



(QUAD) BUFFALO NE, N.Y.

FIGURE 1

SITE LOCATION MAP

C & D POWER SYSTEMS, BUFFALO, N.Y.

SCALE: 1" = 2000'

NUS CORPORATION

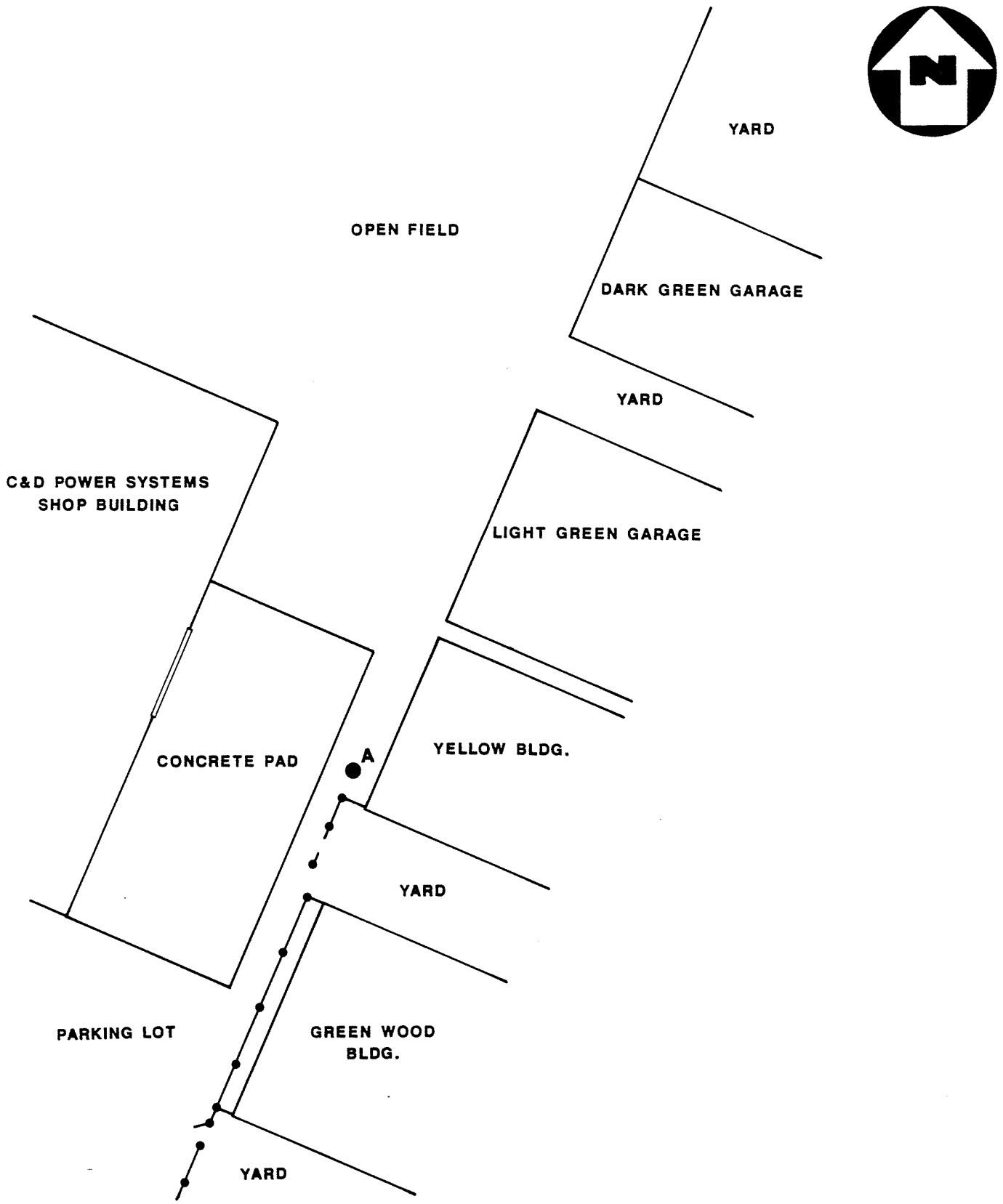


FIGURE 2

SITE MAP

C&D POWER SYSTEMS, BUFFALO, N.Y.

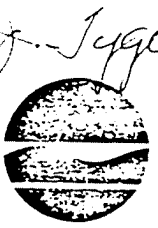
SCALE : 1"=10'

NUS CORPORATION

APPENDIX B

BACKGROUND INFORMATION

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-4015



Thomas C. Jorling
Commissioner

July 16, 1987

Ms. Pamela. J. Reich
C & D Power Systems, Inc.
3043 Walton Road
Plymouth Meeting, PA 19462

Dear Ms. Reich:

Re: C & D Power Systems, ID #915134

Commissioner Jorling has asked this office to reply to your letter of May 19, 1987 to former Commissioner Williams, concerning modification of the ownership portion of the Registry of Inactive Hazardous Waste Disposal Sites site form for site no. 915134, C & D Power Systems.

Allied-Signal Corp., has been identified as an owner of this property. The new site form is enclosed. If you have any questions, please contact Dennis J. Farrar, of my staff, at (518) 457-0747.

Sincerely,

Charles N. Goddard, P.E.
Chief
Bureau of Hazardous Site Control
Division of Solid and Hazardous Waste

Enclosure

cc: Commissioner Jorling

bcc: D. Engel
N. Nosenchuck
C. Goddard
J. Tygert, R/9
R. Olazagasti
D. Farrar
File

DF/me

PR-203/vh

N. Niagara St
1 J

C&D POWER SYSTEMS, INC.

3043 Walton Road
Plymouth Meeting, PA 19462
Telephone (215) 828-9000
Teletype 510-660-8436

May 19, 1987

Mr. Henry G. Williams
Commissioner
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

RE: DEC Site #: 915134
Site Name: C&D Power Systems
Site Address: 45 Scoville Avenue,
Buffalo, NY 14206

PETITION FOR MODIFICATION OF SITE INFORMATION

Dear Mr. Williams:

Regarding the above referenced site, C & D Power Systems, Inc., would like to petition for a change in the Site Owner/Operator Information section of the waste disposal site report form. While C & D was the facility operator from the years 1969 to 1985, the site was owned by Allied-Signal Corporation, Columbia Road and Park Avenue, Morristown, New Jersey, 07960, of which C & D Power Systems was a subsidiary. C & D was sold from Allied in 1986, but under the agreement of sale, Allied retains the responsibility for assessing and remediating any contamination on the adjacent properties. Both corporations will be actively involved in site cleanup. For this reason we respectfully request that Allied-Signal be listed as a co-owner of the site in the Registry.

For additional information, please contact me at (215) 828-9000 extension 372.

Sincerely,

Pamela J. Reich
Corporate Manager
Environment, Health, and Safety

PJR/vh

cc: Wm. F. Blank - Allied-Signal

RECEIVED
JUN 05 1987
BUREAU OF
HAZARDOUS SITE CONTROL
DIVISION OF SOLID AND

RECEIVED
JUN 04 1987
DIRECTOR'S OFFICE
DIVISION OF SOLID AND
HAZARDOUS WASTE

RECEIVED
JUN 4 1987
COMMISSIONER OF
ENVIRONMENTAL
CONSERVATION

ALLIED C&D Power Systems

3043 Walden
Plymouth
Telex
Telecopier

January 7, 1986

Division of Solid Waste
New York Department of Environmental Conservation
Wolf Road
Albany, NY 12233

re: NYD085686426
Small Quantity Generator
45 Scoville Avenue
Buffalo, NY 14206

Dear Sirs:

Enclosed are two (2) copies of a consultants report on findings obtained from an environmental assessment conducted at C&D Power Systems, Buffalo, New York site. This facility was utilized as a lead acid battery sales and service center from 1969 to 1985. C&D Power Systems has discontinued operations at the facility. Although Buffalo was a small operation, lead and sulfuric acid were handled on the site. As part of our company policy, an environmental evaluation was performed to determine if any decontamination is necessary prior to sale of the property.

The consultants report indicates that there is some soil contamination with lead on the C&D property as well as on adjacent properties. The contamination appears to be limited to the top three feet of soil and groundwater has not been impacted. A 103(c) Notification of Hazardous Waste Site was filed during July 1985.

Our intent, based on the sampling results, is to remove the contaminated soil on C&D property as described in the report, (Section 4.2-Excavation Plan). Contamination on the residential properties will be further delineated by a thorough secondary sampling survey followed by soil removal to background soil lead levels. The proposed residential sampling plan is described in Section 4.1 of the report.

This report, with our remedial action plan, is being submitted for your review and comment. We would like to meet with you at your earliest convenience to discuss our plans in detail. We would like to start the decontamination immediately following the spring thaw in 1986.

Please review the report and feel free to contact me at 215-828-9000.

Sincerely,

Pamela J. Reich

Pamela J. Reich
Manager Environment,
Safety, and Health

PJR/cmm

Attachment

cc: J. Gunder (C&D, w/o Attachments)
J. Princevalli (C&D, w/o Attachments)
J. Case (C&D, w/o Attachments)
Wm. F. Blank (Allied, Morristown, w/o Attachments)
C.A. Werle (ERM, Northeast)

ERM-Northeast

SOIL QUALITY INVESTIGATION
C & D POWER SYSTEMS
BUFFALO, NEW YORK
SALES OFFICE

December, 1985

Prepared by:
ERM-Northeast
88 Sunnyside Boulevard
Plainview, New York 11803

ERM-Northeast

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Background

Allied/C & D Power Systems formerly owned and operated an industrial battery sales and maintenance office at 45 Scoville Avenue in Buffalo, New York. In July, 1985 the site was sold and currently operates as part of an independent company. The industrial batteries that were stored and refurbished at the site consisted of lead plates suspended in sulfuric acid.

Past plant operating practices included the storage and washing of batteries on a 20 by 40 foot outdoor concrete pad at the rear of the facility. Batteries were washed on the unbermed pad until approximately 1983. Outdoor battery storage continued until approximately June, 1985. The outer edge of the pad is approximately six feet from the rear property line.

To evaluate soil quality around the pad, C & D personnel conducted a surficial soil sampling program in early 1985. Twenty three soil samples were collected between the pad and the rear property line and laterally away three feet from the sides of the pad. The samples were analyzed for total lead. As shown in Figure 1-1, total lead concentrations were found to range from 160 ppm to 40,000 ppm. Twenty-one of the samples exceeded 1000 ppm.

1.2 Objectives

ERM-Northeast was retained to complete the evaluation of soil quality at the C & D Buffalo Sales Office. The objectives of ERM's soil quality investigation were six fold:

1. To complete the areal delineation of on-site lead contamination.

EXTERIOR SURFACE SOILS BUFFALO, N.Y. SALES

ALLIED C&D Power Systems
3043 Walton Road
Plymouth Meeting, PA 19462
Telephone (215) 828-9000
Telatype: 510-660-8436

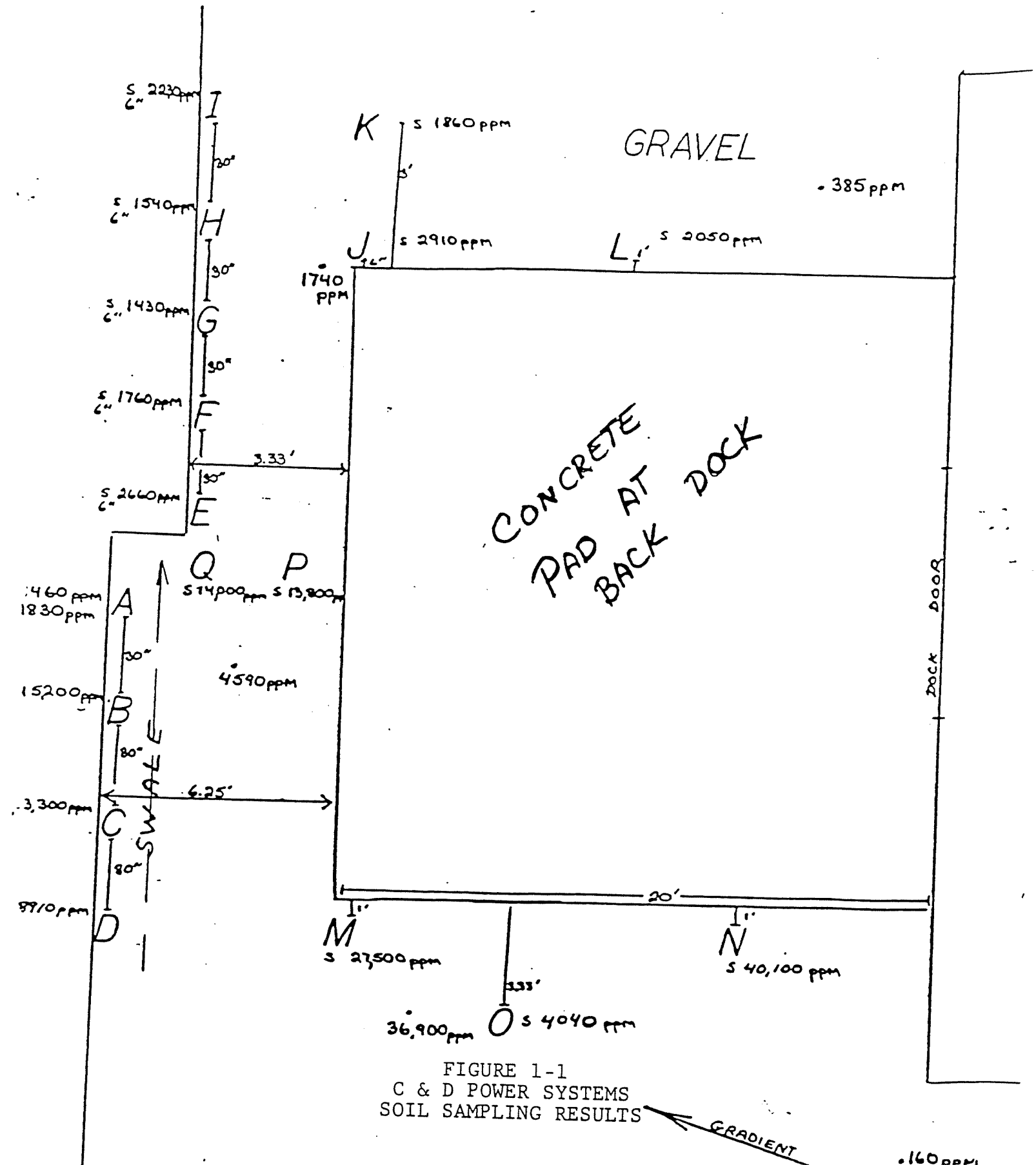


FIGURE 1-1
C & D POWER SYSTEMS
SOIL SAMPLING RESULTS

2. To determine the vertical extent of on-site lead contamination.
3. To determine the areal extent of contamination off-site.
4. To evaluate the areal and vertical extent of lead contamination beneath the concrete pad.
5. To determine the water table elevation and ground water quality beneath the site.
6. To establish the local background lead concentration.

This report presents the results of ERM's investigation and includes a recommended remedial plan for the site.

2.0 COLLECTION AND ANALYSIS OF SAMPLES

To accomplish the stated objectives ERM conducted a site investigation that consisted of four major elements: installation and sampling of four borings to bedrock (approximately 8.5 feet below grade), installation and sampling of eight 5 foot deep borings, collection of 14 surficial soil samples and installation and sampling of a ground water monitoring well. Figure 2-1 presents the location of all soil and ground water sampling sites. Boring and sampling procedures for each group of samples are described below.

2.1 Deep Borings

Four borings, designated on Figure 2-1 as A, B, C and D were advanced from the surface to 8.5 feet before bedrock was encountered. The borings were advanced using the hollow stem auger method of drilling. Split spoon samples were collected from each boring at depths of 0-1', 1'-2', 2'-3', 3'-4', 4'-5' and 6'-8'. Boring logs were maintained for each of the borings, describing the geologic deposits encountered. Boring logs are presented in Appendix A.

A soil sample was collected for analysis from each split spoon sample. Samples were analyzed for total lead except the four 0-1' samples. These four surficial samples were analyzed for lead using USEPA Extraction Procedure (E.P.) Toxicity protocols to determine the regulatory status of the samples.

All sampling equipment including split spoon samplers, trowels and spatulas were decontaminated between samples. This included a detergent wash and clean water rinse. Auger flights were decontaminated between each bore hole. Lab samples were taken from the split spoon samples after they were thoroughly mixed in individual aluminum pans.

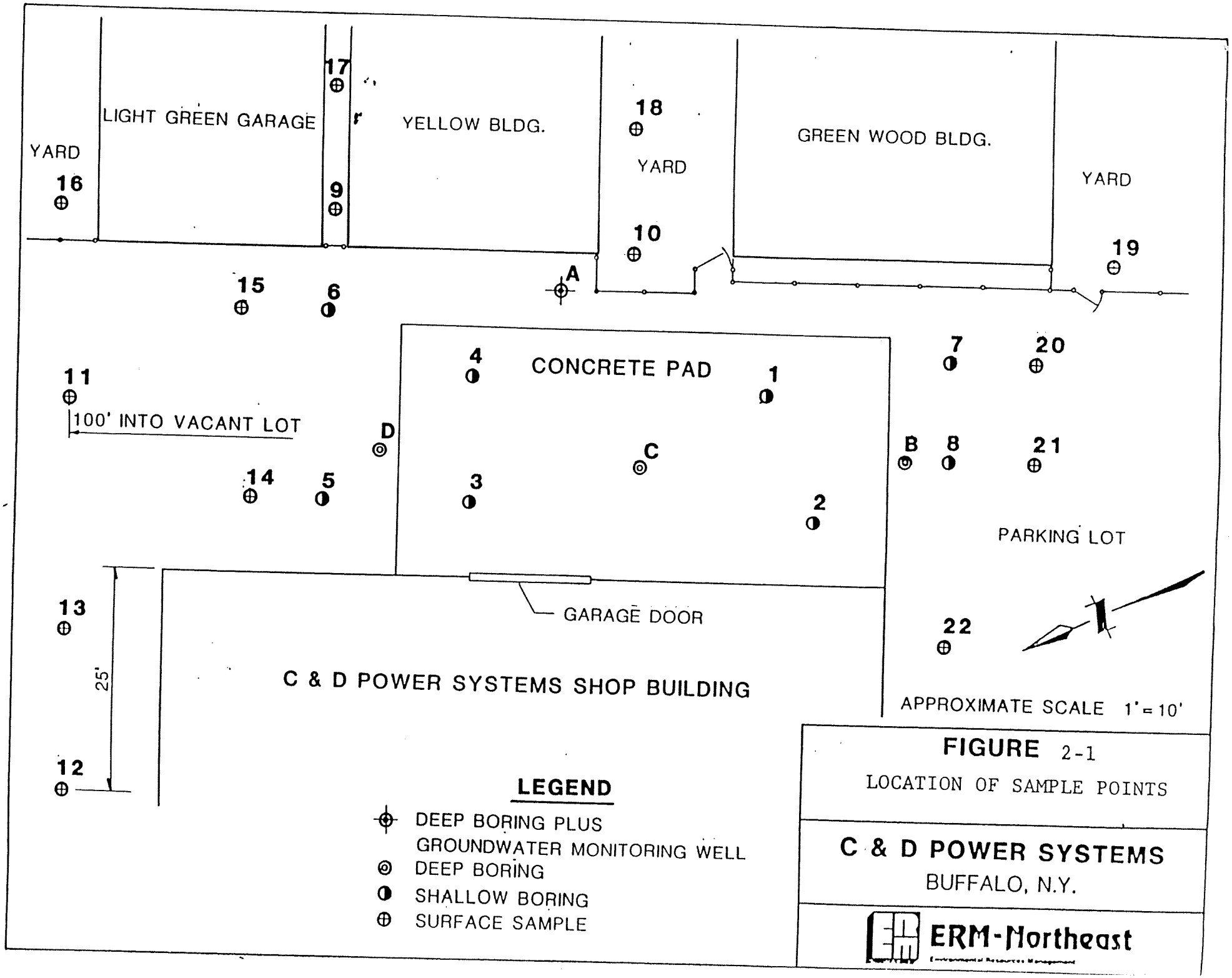


FIGURE 2-1

LOCATION OF SAMPLE POINTS

C & D POWER SYSTEMS

BUFFALO, N.Y.

ERM-Northeast

2.2 Shallow Borings

Eight borings numbered 1 through 8 were drilled through and around the concrete pad as shown on Figure 2-1. Each of the borings was drilled to a depth of five feet. Split spoon samples were collected from each boring at depths of 0-1', 2'-3' and 4'-5'. Laboratory samples were collected for total lead analysis from each of the split spoon samples. Equipment decontamination procedures as previously described were followed. Logs for each shallow borehole are presented in Appendix A.

2.3 Surficial Soil Sampling

Soil samples were collected at fourteen points numbered 9 through 22 as shown on Figure 2-1. These samples were collected from the soil surface to a depth of 6 inches. Each sample collected was analyzed for total lead.

Surface sample number 11 was taken approximately 100-feet north from the C & D Power Systems shop building in a vacant lot. This sample was collected to determine the local background lead concentration.

2.4 Ground Water Monitoring Well

A ground water monitoring well was installed in Borehole A as shown on Figure 2-1. The well consists of an 8-foot length of 2-inch diameter flush threaded PVC pipe and a 2-foot length of machine slotted (.010 slot) PVC well screen. The well screen was set directly above bedrock with the top of the screen approximately 0.5 feet below the water table. Four feet of gravel was packed around the well screen and casing. A 3-foot bentonite seal was installed above the gravel pack. The well was completed at the surface in a 4-inch diameter protective

steel casing set in grout with a locking cap. A well log showing construction details is presented in Appendix A.

Following installation, the well was developed by bailing. Development continued until the well had been thoroughly evacuated. The well was allowed to recover overnight before it was sampled.

Water level measurements collected before the well was developed showed the depth to the water table beneath the site is approximately 5.6 feet.

A ground water sample was bailed from the well for lead and pH analysis. The sample was filtered in the field prior to preservation with a 0.45 micron filter to remove suspended silt and clay particles. The filtered sample was then acidified before transportation to the laboratory.

3.0 ANALYTICAL RESULTS

Analytical sampling results are presented in Table 3-1. The soil sampling results generally indicate that total lead concentrations decrease laterally and vertically away from the pad. Figure 3-1 shows the total lead concentrations in the 0-1' foot soil samples. On the south side of the pad, samples 7 and 8, which were collected six feet from the edge of the pad both had total lead concentrations in excess of 2000 ppm. Samples 20, 21, and 22 located further out from the pad were below 500 ppm.

On the north side of the pad lead concentrations in excess of 1000 ppm extend beyond samples 14 and 15 which were collected approximately 12 feet from the pad. Sample 16, collected on private property northeast of the pad also contained lead at approximately the concentration of that found in samples 14 and 15. These data appear to indicate that the pattern of surface runoff from the pad was to the north and northeast. Samples 12 and 13 were collected from the unpaved driveway on the north side of the sales building and these results show lead concentrations were below 1000 ppm in this area.

Sample 11 was collected 100 feet north of the site property line in the adjacent vacant lot to establish local background soil concentrations. This sample contained 483 ppm of total lead. Generally, background lead concentrations would be expected to be below 100 ppm. The detected background concentration may be the product of leaded gasoline auto and truck exhausts. The predominant industrial land usage in the area and the high silt and clay content of the surficial soils may also be contributing

ERM-Northeast

TABLE 3-1

SOIL AND GROUND WATER SAMPLE RESULTS

C & D POWER SYSTEMS - BUFFALO, NEW YORK

Deep Borings

Sample Depth	Boring Number A	B	C	D
0-1'	.36 ppm (EP Tox)	4.21 ppm (EP Tox)	.2 ppm (EP Tox)	111.0 ppm (EP Tox)
1-2'	764.	1070.	5283.	1000
2-3'	474.	226.	265.	3884
3-4'	82.	119.	427.	451.
4-5'	280.	51.9	191.	199.
6-8'	20.	20.6	54.3	147.

All Pb results in mg/kg (dry weight)

Shallow Borings

Sample Depth	Boring Number 1	2	3	4	5	6	7	8
0-1'	353.	442.	423.	971.	1906.	4305.	2860.	2466.
2-3'	120.	72.3	1801.	131.	1014.	102.	66.	2843.
4-5'	16.0	27.4	322.	51.7	24.4	17.	80.2	46.9

All results in mg/kg (dry weight)

Surface Soil Samples

	Sample Number 9	10	11	12	13	14	15	16	17	18	19	20	21	22
0-6"	885.	[illegible].	483.	415.	667.	6182.	5404.	5070.	868.	726.	1935.	409.	405.	281.

All results in mg/kg (dry weight)

Ground Water Sample

Collected from Monitoring Well Installed at Borehole A

pH = 7.62

Pb = <.04 ppm

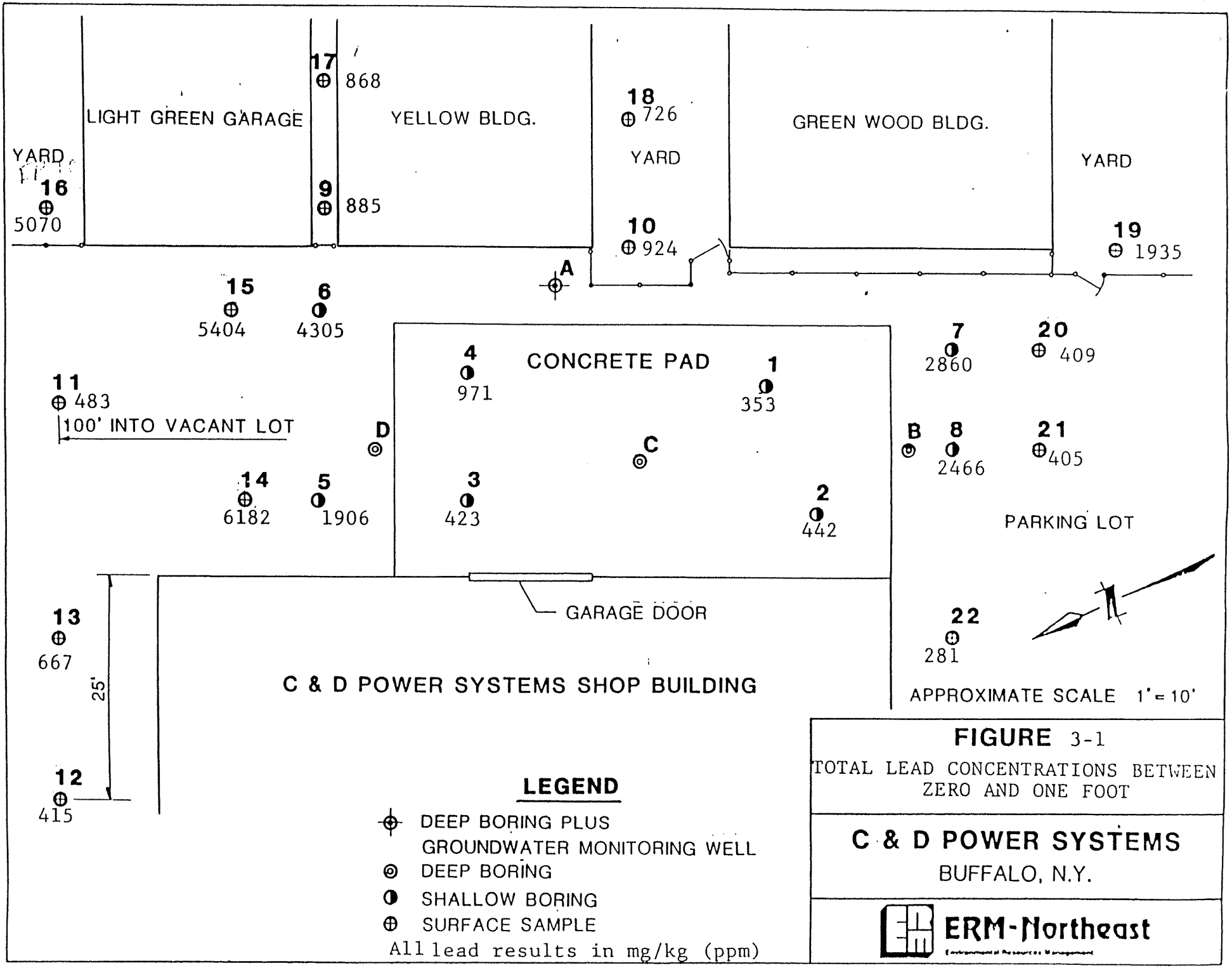


FIGURE 3-1

TOTAL LEAD CONCENTRATIONS BETWEEN ZERO AND ONE FOOT

C & D POWER SYSTEMS

BUFFALO, N.Y.

ERM-Northeast

factors. Other samples collected away from the pad (numbers 12, 20, 21, 22) also consistently indicate that background lead concentrations generally range from 300 to 500 ppm.

Samples from boreholes C and 1 through 4 collected beneath the pad show lead concentrations are almost uniformly below 1000 ppm. The samples from 1'-2' in borehole C and 2'-3' in borehole 3 did contain lead in excess of 1000 ppm. Generally however, leakage through the pad appears to have been limited.

Samples 9, 10, 17 and 18 collected on private residential property directly behind the pad were found to contain lead above background levels but below 1000 ppm. Samples 16 and 19 which were also collected on private property northeast and southeast of the pad respectively both exceeded 1000 ppm. As previously discussed, sample 16 appears to reflect site drainage conditions. The concentration detected in sample 19 may be the result of pad runoff in a shallow drainage swale that runs along the rear fence line. Samples G, H, and I collected by C & D personnel (see Figure 1-1) also detected lead concentrations that are generally consistent with that found in sample 19.

Figure 3-2 presents the results from the 2'-3' samples. These results are not as consistent as those found at the surface, however, they indicate that lead concentrations above 1000 ppm extend down to three feet at several locations within six feet of the pad. The 1'-2' samples from boreholes 5, 6, 7 and 8, all located six feet out from the pad, uniformly exceeded 1000 ppm of the total lead.

Figure 3-3 presents the results of the 4'-5' samples. This figure shows that lead concentrations at this depth have uniformly decreased below 1000 ppm. Only the sample from borehole 7, 802 ppm, is above background levels found at the site.

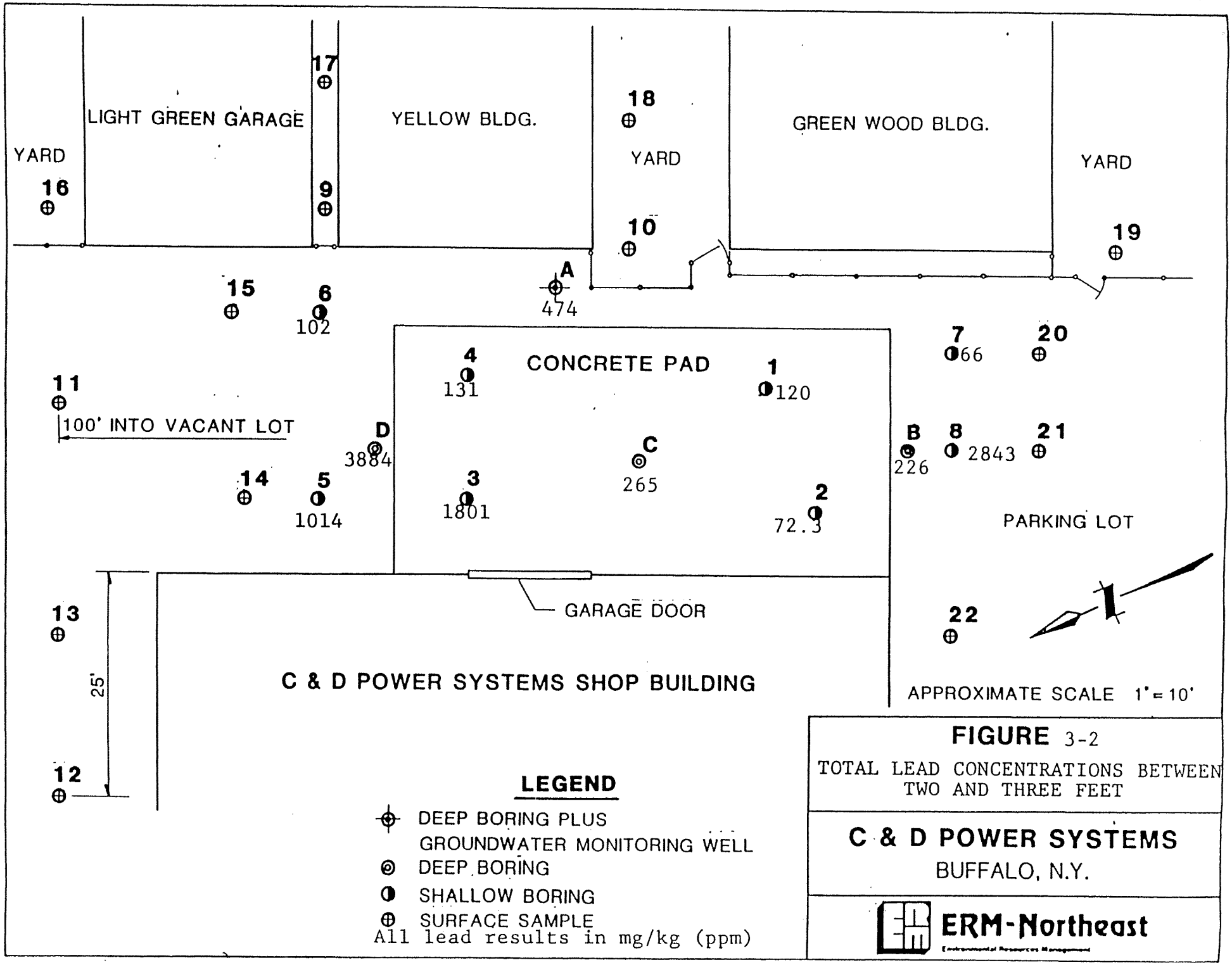


FIGURE 3-2

TOTAL LEAD CONCENTRATIONS BETWEEN TWO AND THREE FEET

C & D POWER SYSTEMS

BUFFALO, N.Y.

ERM-Northeast

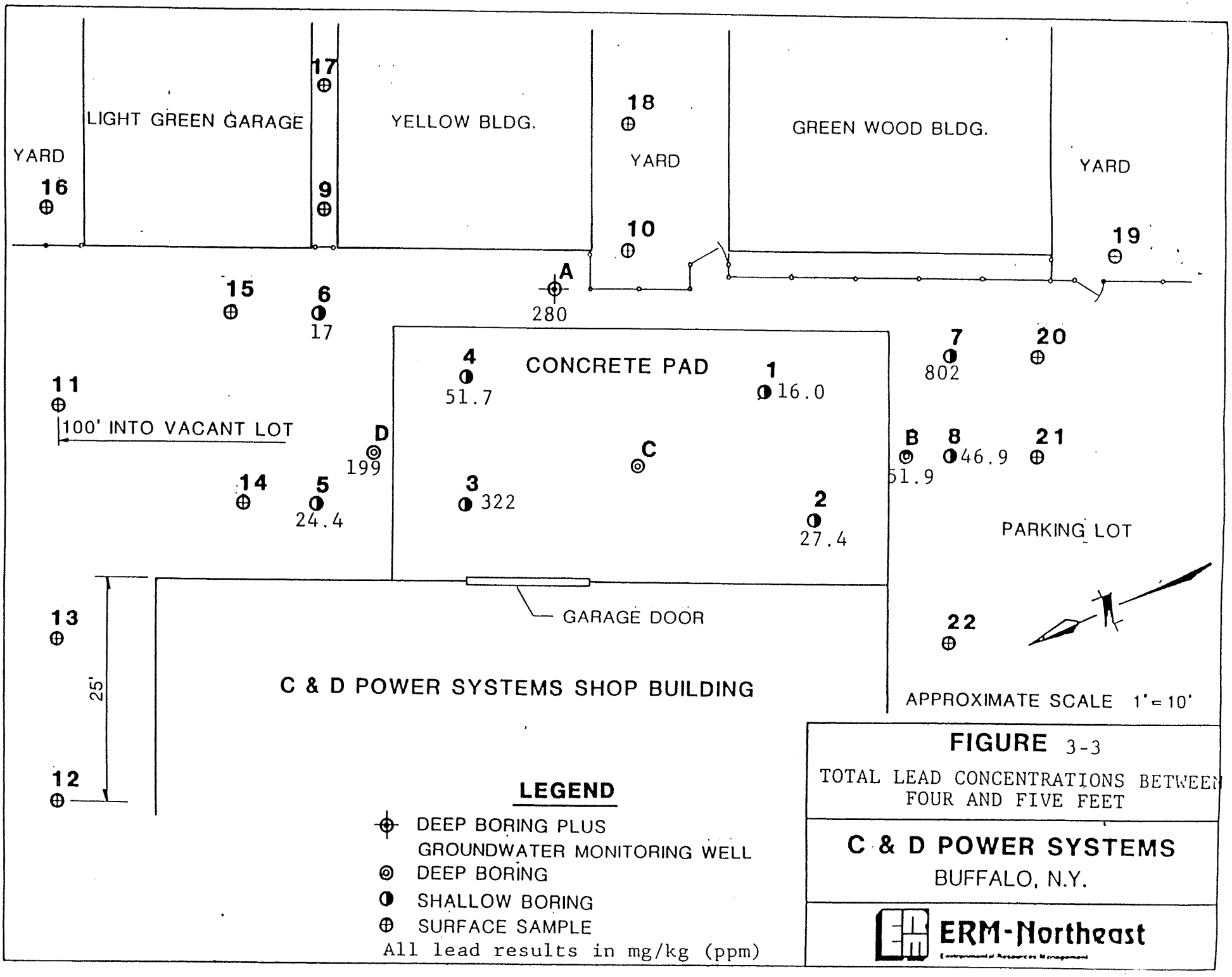


FIGURE 3-3

TOTAL LEAD CONCENTRATIONS BETWEEN FOUR AND FIVE FEET

C & D POWER SYSTEMS

BUFFALO, N.Y.

ERM-Northeast

The four surficial samples from boreholes A through D, analyzed for E.P. toxic lead, correlate well with total lead concentrations. E.P. Toxicity samples from boreholes A, B and C were all below the E.P. Toxicity limit of 5 ppm for lead. Total lead concentrations in samples collected near A, B and C were below 10,000 ppm. The E.P. Toxicity result from borehole D was 111 ppm, which exceeds the USEPA maximum lead limit. The soil in the vicinity of borehole D would be considered hazardous according to federal hazardous waste regulations. Soil samples collected near borehole D by C & D personnel (M, N and an undesignated sample) were found to contain total lead concentrations between 20,000 ppm and 40,000 ppm.

The ground water sample results indicate that lead is being attenuated in the unsaturated zone and is not being leached into the ground water. Lead was not detected in the ground water sample. A pH of 7.62 was found in ground water and this provides additional confirmation that no ground water quality impacts are present at the site.

4.0 RECOMMENDED REMEDIAL PLAN

ERM's recommended remedial plan for the Buffalo Sales Office consists of two major elements: additional soil sampling and excavation of contaminated on-site soils. The recommendations are explained in detail below.

4.1 Additional Soil Sampling

On-Site Sampling

Based on the results of ERM's investigation, additional sampling appears to be warranted on the north side of the pad to complete the areal and vertical delineation of lead contamination. Existing samples 14 and 15 showed lead concentrations at the surface exceeded 5000 ppm 12 feet away from the pad. ERM recommends that soil samples be collected at depths of 1'-2' and 2'-3' at sample points 14 and 15. Two additional sample points numbered 23 and 24 will be sampled at depths of 0-1', 1'-2' and 2'-3'. This amounts to ten additional samples to be collected on site. The location and depth of the samples is shown on Figure 4-1.

Off-Site Sampling

All of the soil sampling on residential property showed surficial lead concentrations in excess of local background levels. Two of the residential samples exceeded 1000 ppm. ERM believes additional sampling on the adjacent properties is an important component of the remedial plan.

As shown on Figure 4-1, ERM recommends the collection of additional samples at sample points 9, 10, 16, 17, 18 and 19 at depths of 1'-2' and 2'-3'. Samples should also be collected at 8 additional sample points at depths of

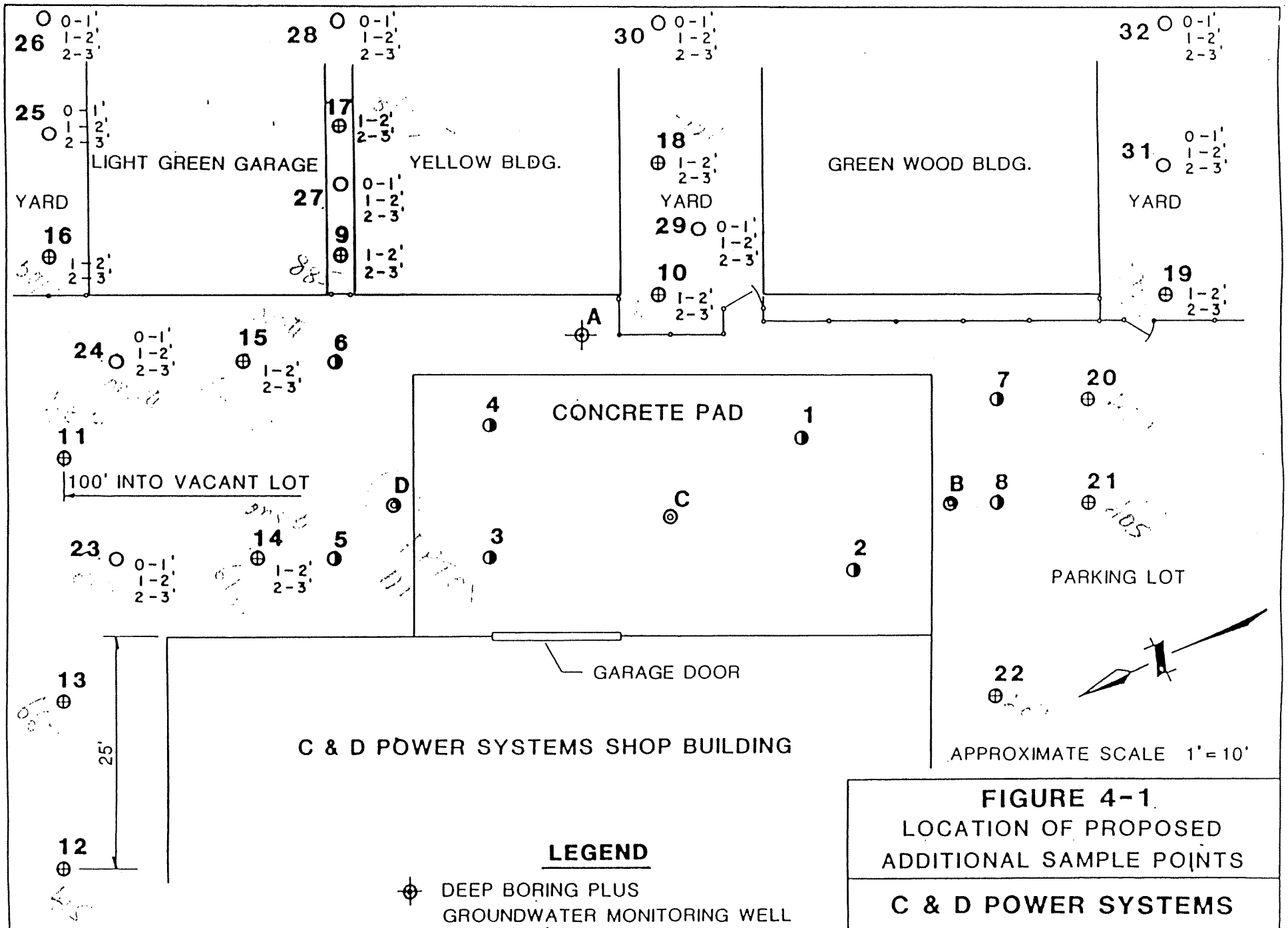


FIGURE 4-1
LOCATION OF PROPOSED ADDITIONAL SAMPLE POINTS

C & D POWER SYSTEMS
BUFFALO, N.Y.

ERM-Northeast

0-1', 1'-2', and 2'-3'. These sample points are numbered 25, through 32. A total of five surface soil samples will also be taken from surrounding off site areas to better describe the local background lead concentration. Three of the five samples will be taken from the bordering residential front yards. A total of 41 samples will be collected off-site.

4.2 Excavation Plan

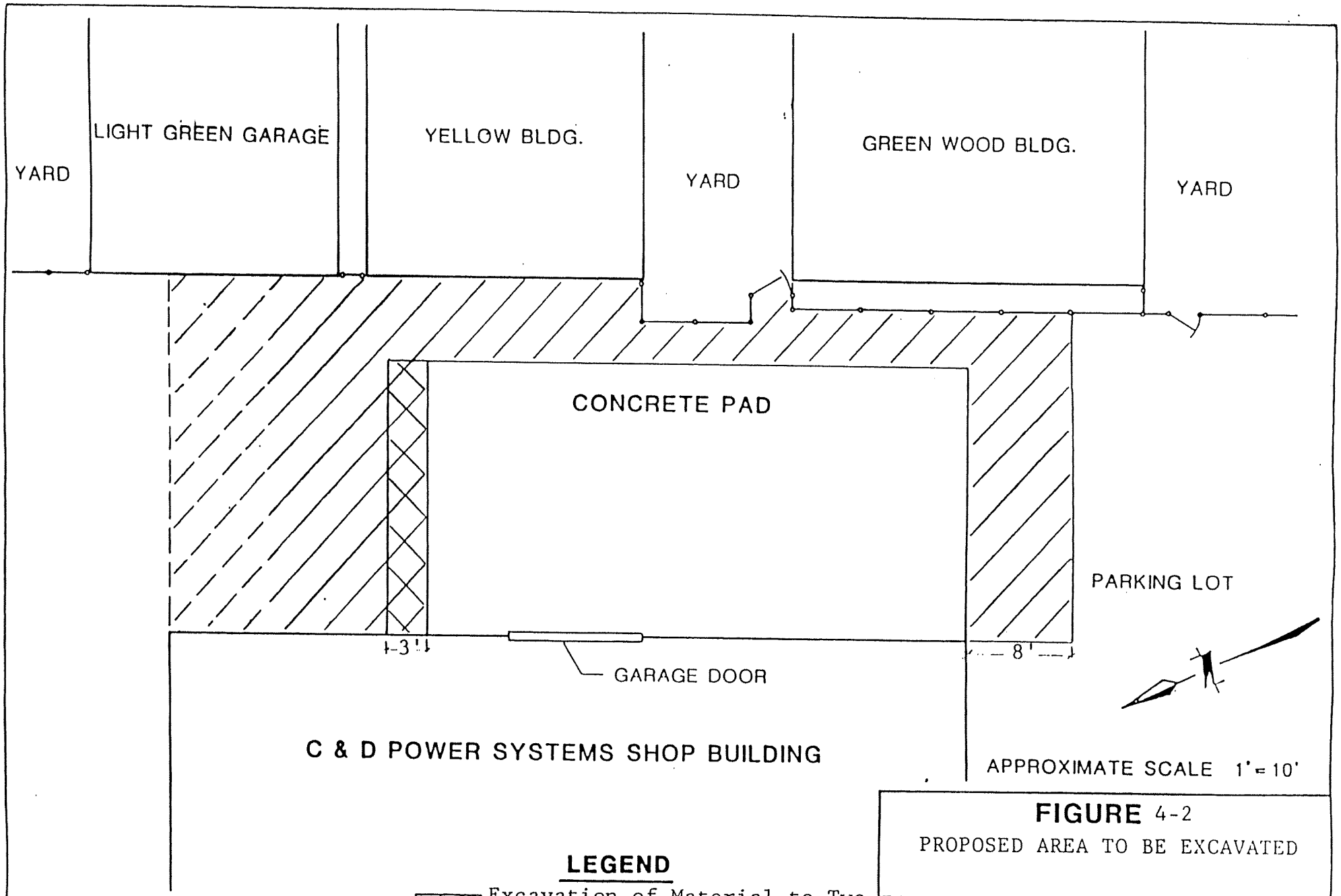
Based on regulatory clean-up criteria a general guideline of removing soils with lead concentrations in excess of 1000 ppm is believed to be appropriate. ERM-Northeast supports this guideline for the C & D Power Systems site in Buffalo on the basis of the following factors:

- C & D Power Systems is located in a generally industrial area of Buffalo. The current and future land use of the property will remain industrial.

- The background sample tested was found to have a total lead concentration of 483 ppm indicating a high natural background lead concentration.

- The lead detected in the soil has a low leachability as shown by the low E.P. Toxicity results compared to the results of the total lead analyses. Additionally, ground water, which is approximately 5.0 feet from the soil surface, has not been impacted.

Using a guideline of 1000 ppm and the data collected during this investigation, ERM recommends the excavation of soils as shown in Figure 4-2. Because the northern limit of lead concentrations over 1000 ppm has not been established, an estimated excavation limit was assumed for the purpose of this report.



LEGEND

Excavation of Material to Two Feet with Disposal as Non-hazardous waste (Dashed where estimated).

Excavation to Three Feet with Disposal as Hazardous Waste

FIGURE 4-2

PROPOSED AREA TO BE EXCAVATED

C & D POWER SYSTEMS

BUFFALO, N.Y.

ERM-Northeast

The actual volume of soil requiring excavation may change somewhat based on the results of the proposed additional sampling. An excavation plan has not been developed at this time for excavation of soils on residential property.

The ruled area shown in Figure 4-2 indicates the projected area of on site excavation. This area represents approximately 810 square feet. Analytical results indicate that lead concentrations of 1000 ppm or more are generally present to a depth of about two feet. Using two feet as the excavation depth, approximately 60 cubic yards of soil should be removed.

Based on the results of the E.P. Toxicity analyses, it can be concluded that only a small portion of the soil should be classified as a hazardous waste. This conclusion is based on the correlation between total lead concentrations and the E.P. Toxicity lead concentrations. ERM proposes that the area cross hatched on Figure 4-2 be excavated to three feet and disposed of as a hazardous waste. This represents a total of 7 cubic yards of soil. All other excavated soil will be disposed of as a non-hazardous waste.

We have distinguished between the hazardous and non-hazardous soils because of the disposal tax (about $29.00 per ton) charged on hazardous waste. Disposal of the soils shown on Figure 4-2 as non-hazardous will result in a savings of approximately $3,050.00.

ERM believes that excavation of off-site soils will also be necessary, however, the additional off-site sampling is necessary to begin estimating potential quantities for removal. Because of the health and safety issues related to lead levels in the soil on residential property, it may be advisable to use cleanup guidelines below 1000 ppm. ERM in conjunction with C & D Power Systems will develop appropriate residential clean-up levels following the completion of the additional soil sampling.

APPENDIX A

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. WO Number

Well Number A Total Depth Diameter

Surface Elevation Water Level Initial 24-hrs

Screen: Dia. Length Slot Size

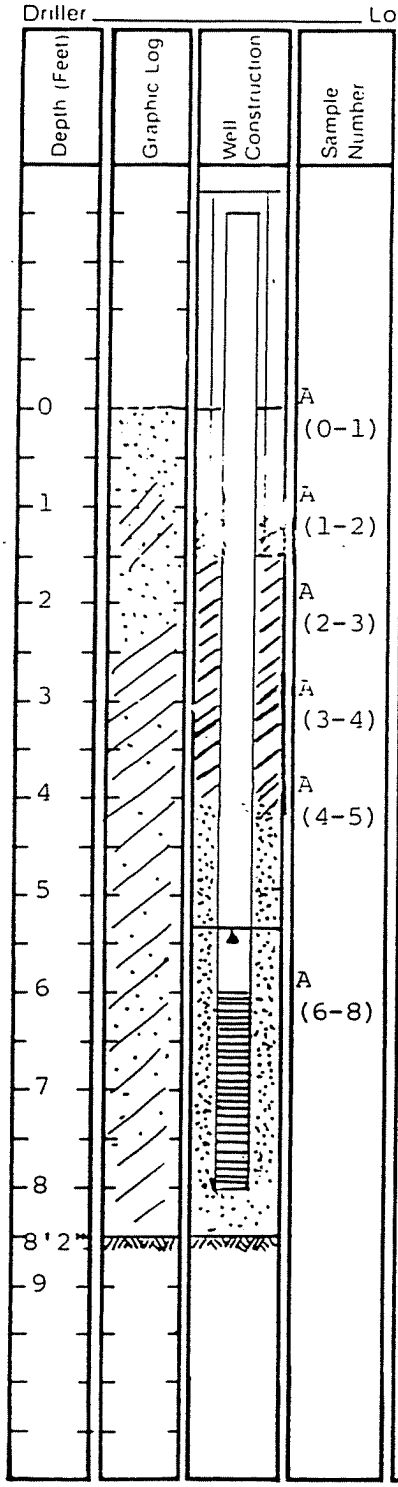
Casing: Dia Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8-15-85

Sketch Map

Notes



Description/Soil Classification (Color, Texture, Structures)
Brownish black sandy silt with some pebbles
Damp brownish black sandy silt with some yellowish brown sandy clay
Upper portion - brownish black sandy silt, lower portion - yellowish brown clay
Yellowish brown sandy clay with some reddish highlights
Dark yellowish brown clay, some slightly sandy
Upper portion - yellowish brown clay, some slightly sandy, lower portion - pale brown clay
Bedrock

Environmental Resources Management

Drilling

Project C & D Power Systems Owner

Location Buffalo, N.Y. W.O. Number

Well Number B Total Depth Diameter

Surface Elevation Water Level: Initial 24-hrs.

Screen: Dia. Length Slot Size

Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8/15/85

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			B (0-1)	Dry, brownish black medium sandy
1			B (1-2)	Upper portion - dry, brownish black medium sandy silt, lower portion - dry yellowish brown clay
2			B (2-3)	Dry, yellowish brown medium sandy clay with abundant small angular pebbles, brownish black marble
3			B (3-4)	Damp, yellowish brown medium sandy clay with some small pebbles brownish black marble
4			B (4-5)	Upper 2 inches - pale yellow coarse sand, remainder - damp, dark yellowish brown clay
5				
6			B (6-8)	Upper portion - dark yellowish brown clay, lower portion - wet, gray clay with some medium sand
7				
8				
9				

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. W.O. Number

Well Number C Total Depth Diameter

Surface Elevation Water Level: Initial 24-hrs.

Screen: Dia. Length Slot Size

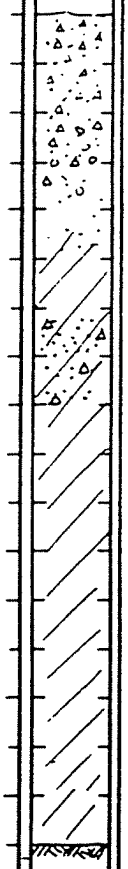
Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8-16-85

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			C (0-1)	Damp, brownish black coarse sandy silt with abundant angular pebbles
1			C (1-2)	Damp, brownish black coarse sandy silt with abundant angular and round pebbles
2			C (2-3)	Damp, brownish black sandy silt with yellowish brown sandy clay and reddish brown clay
3			C (3-4)	Wet, dark yellowish brown clay with some coarse sand and small angular pebbles.
4			C (4-5)	Wet, dark yellowish brown clay
5				
6			C (6-8)	Wet, pale brown clay
7				
8				
9				

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. W.O. Number

Well Number D Total Depth Diameter

Surface Elevation Water Level. Initial 24-hrs.

Screen. Dia. Length Slot Size

Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8-15-85

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			D (0-1)	Brownish black fine sandy silt with scarce small angular pebbles
1			D (1-2)	Brownish black fine sandy silt with abundant small angular pebbles.
2			D (2-3)	Damp, brownish black fine sandy silt with abundant small angular pebbles
3			D (3-4)	Damp, brownish black fine sandy silt some yellowish brown sandy clay with scarce angular pebbles
4				No sample retention
5			D (4-5)	Yellowish brown clay, fine sandy clay
6			D (6-8)	Wet dark yellowish brown clay
7				
8				
9				

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. WO Number

Well Number 1 Total Depth Diameter

Surface Elevation Water Level, Initial 24-hrs.

Screen: Dia. Length Slot Size

Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			1 (0-1)	Damp, brownish black fine sandy silt with some small angular pebbles
1				
2			1 (2-3)	Damp, dark yellowish brown fine sandy clay with brownish black marble
3				
4			1 (4-5)	Damp, dark yellowish brown clay with reddish highlights
5				
6				
7				
8				
9				

Environmental Resources Management

Drilling Log

Project: C & D Power Systems Owner: _____

Location: Buffalo, N.Y. W.O. Number: _____

Well Number: 2 Total Depth: _____ Diameter: _____

Surface Elevation: _____ Water Level: Initial _____ 24-hrs. _____

Screen: Dia. _____ Length _____ Slot Size _____

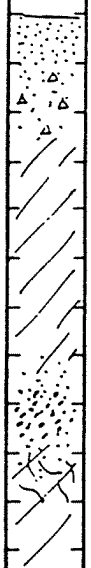
Casing: Dia _____ Length _____ Type _____

Drilling Company: Empire Soils Drilling Method: hollow stem auger

Driller _____ Log By: Randy White Date Drilled: 8-16-85

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			2 (0-1)	Upper portion - brownish black and yellowish brown medium sand lower portion - brownish black medium sandy silt with some small angular pebbles
1				
2			2 (2-3)	Dark yellowish brown fine sandy clay
3				
4			2 (4-5)	Upper portion - wet, pale yellow coarse sand, lower portion - reddish brown clay with yellowish brown marble
5				
6				
7				
8				
9				

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. W.O. Number

Well Number 3 Total Depth Diameter

Surface Elevation Water Level: Initial 24-hrs.

Screen: Dia. Length Slot Size

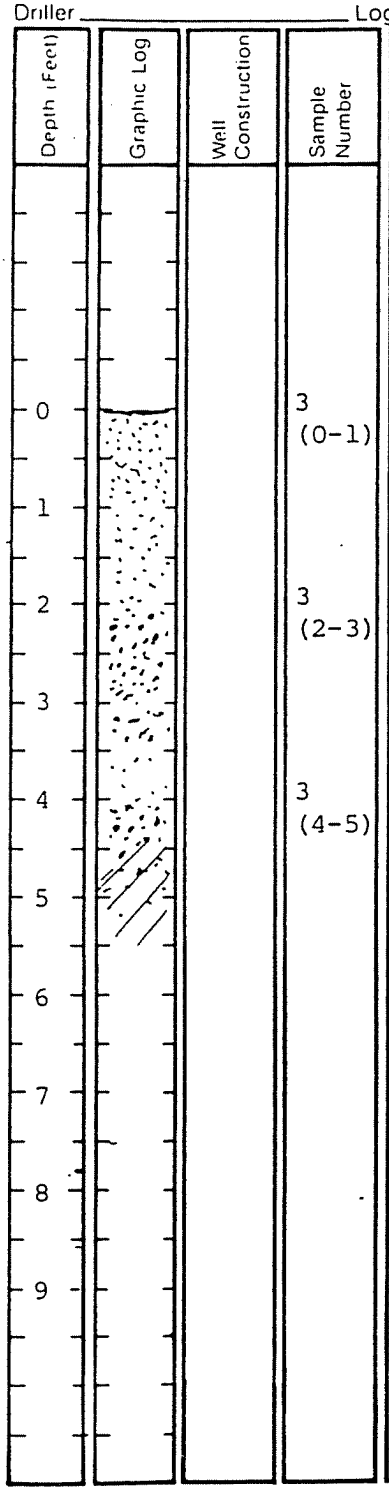
Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8-15-85

Sketch Map

Notes



Sample Number	Description/Soil Classification (Color, Texture, Structures)
3 (0-1)	Brownish black medium sand
3 (2-3)	Upper portion - brownish black and yellowish brown medium to coarse sand, lower 2 inches- dark yellowish brown slightly sandy clay
3 (4-5)	Upper portion - brownish black and yellowish brown coarse sandy silt, lower 3 inches - dry yellowish brown clay

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. WO Number

Well Number 5 Total Depth Diameter

Surface Elevation Water Level Initial 24-hrs.

Screen. Dia. Length Slot Size

Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8-15-85

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			5 (0-1)	Dry, brownish black fine sandy silt
1				
2			5 (2-3)	Upper portion - dry brownish black fine sandy silt, lower portion - dark yellowish brown clay
3				
4			5 (4-5)	Dark yellowish brown clay
5				
6				
7				
8				
9				

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. W.O. Number

Well Number 6 Total Depth Diameter

Surface Elevation Water Level: Initial 24-hrs.

Screen: Dia. Length Slot Size

Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8-15-85

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			6 (0-1)	Damp, brownish black fine sandy silt with some pebbles and pale yellow medium sand
1				
2			6 (2-3)	Damp, yellowish brown clay with reddish highlights medium sand and brownish black silt mixed in
3				
4			6 (4-5)	Wet, yellowish brown clay
5				
6				
7				
8				
9				

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. W.O. Number

Well Number 7 Total Depth Diameter

Surface Elevation Water Level: Initial 24-hrs.

Screen: Dia. Length Slot Size

Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8-15-85

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			7 (0-1)	Dry, brownish black fine sandy silt with some angular pebbles
1				
2			7 (2-3)	Dark yellowish brown fine sandy clay with a brownish black marble
3				
4				No sample retention
5			7 (4-5)	Dark yellowish brown clay with some sandy clay
6				
7				
8				
9				

Environmental Resources Management

Drilling Log

Project C & D Power Systems Owner

Location Buffalo, N.Y. WO Number

Well Number 8 Total Depth Diameter

Surface Elevation Water Level. Initial 24-hrs.

Screen: Dia. Length Slot Size

Casing: Dia. Length Type

Drilling Company Empire Soils Drilling Method hollow stem auger

Driller Log By Randy White Date Drilled 8-15-85

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0			8 (0-1)	Dry and brownish black medium sandy silt with abundant small angular pebbles
1				
2			8 (2-3)	Dry, brownish black medium sandy silt with abundant small angular pebbles some dry dark yellowish brown clay
3				
4				No sample retention
5			8 (4-5)	Dry, yellowish brown clay
6				
7				
8				
9				

C&D POWER SYSTEMS

PR-229

3043 Walton Road
Plymouth Meeting, PA 19462
Telephone (215) 828-9000
Teletype: 510-660-8436

August 14, 1987

Mr. Abul Barkat, P. E.
Senior Sanitary Engineer
New York State Department of Environmental Conservation
600 Delaware Avenue
Buffalo, NY 14202-1073

Dear Mr. Barkat:

Attached is a copy of the revised sampling plan for C & D Power Systems, Buffalo site. The plan incorporates the changes agreed upon during our July 23 meeting. Mr. Werle of ERM has informed me that the sampling could be conducted in mid-September. We request that any further concerns you may have with this plan be presented to us within the next 2 weeks so that we can finalize the scheduling for timely completion.

Several items remain unsettled. As discussed, the DEC does not intend to actively participate in contacting the homeowners prior to sampling. This is contrary to Allied-Signal's policy and their past experience with regulatory agencies. An Allied representative will likely be in contact with you in the near future to discuss this issue. Also, during the July meeting there was the question as to who will supply the sample bottles for the DEC split samples. You agreed to advise us on this on this matter at a later date.

Please address any questions or comments to my attention.

Very truly yours,

Pamela J. Reich, CEP
Corporate Manager Environment,
Health & Safety

PJR/vh

Attachment

cc: C. Werle - ERM
Buffalo Closure File

ERM-Northeast

PROPOSED ENVIRONMENTAL SAMPLING PLAN
C & D POWER SYSTEMS
SALES OFFICE
BUFFALO, NEW YORK

JULY 1987

PREPARED FOR:

C & D POWER SYSTEMS
9043 WALTON ROAD
PLYMOUTH MEETING, PA 19462

PREPARED BY:

ERM-NORTHEAST
88 SUNNYSIDE BOULEVARD
PLAINVIEW, NEW YORK 11803

TABLE OF CONTENTS

1.0 INTRODUCTION

This document presents the recommended Environmental Sampling Plan for the C&D Power Systems, Scoville Avenue, Sales Office site in Buffalo, New York. The primary objective of the sampling plan is to complete the delineation of lead concentrations in the soils surrounding the concrete pad at the rear of C&D facility. A preliminary sampling program was conducted by ERM-Northeast in August, 1985, and documented in ERM's report "Soil Quality Investigation, C&D Power Systems, Buffalo, New York Sales Office."

The sampling plan contained in this submittal is largely based on the recommended sampling plan presented in ERM's previous report. Modifications have been made reflecting NYSDEC Region 9 comments contained in their letter of March 31, 1987, subsequent telephone conversations between ERM and Mr. Abul Barkat of NYSDEC and on-site discussions with NYSDEC on July 23, 1987.

The specific objectives of the sampling plan include the following:

1. Complete the horizontal and vertical delineation of lead contamination in soils on residential properties located behind the C&D facility.

2. Complete the horizontal and vertical delineation of lead contamination in on-site soils north and northeast of the pad.

3. Complete the delineation of on-site and off-site soils to the north and northeast side of the pad that exceed the general background concentrations in the area.

4. Establish local background lead concentrations in soil through the collection and analysis of off-site soil samples.

5. Resample the existing monitoring well to determine whether ground water impacts exist and whether additional monitoring wells are required.

The data collected from the proposed sampling program will be used to develop a remedial action plan for the site. If significant data gaps still exist following completion of the sampling plan, supplemental sampling may be proposed and reviewed with NYSDEC.

2.0 SOIL SAMPLING PLAN

2.1 On-Site Sampling

Based on the results of ERM's investigation, additional on-site sampling appears to be warranted on the north, northeast and south sides of the pad to complete the areal and vertical delineation of total lead and EP Toxic lead concentrations. Previously surficial samples (0.0 to 1.0 feet) from points A and D as shown on Figure 1 were analyzed for lead using EP Toxicity test procedures. The sample from D exceeded 5.0 ppm and it was assumed that soils in the upper foot within three feet of the north side of the pad were hazardous. To complete the delineation of the hazardous soils the following sampling sites are proposed as shown on Figure 1:

Sample Site	Depth	Analyses
Site 5	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 6	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 14	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 15	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 33	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 34	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 35	0.0 to 0.5 ft	EP Tox. (8 metals)

Such speculative statements are not acceptable. To determine the vertical extent of the hazardous material, EP Tox tests will be required from deeper zones on locations where surficial samples will fail the

Previous total lead sampling results from below one foot at sites A, D, 5 and 6 were uniformly below 1,500 ppm. It is highly unlikely that these soils would exceed EP Toxicity concentration limits so deeper EP Toxicity samples do not appear to be justified.

To complete the areal and vertical delineation of total lead concentrations on-site, the following sample sites and depths are proposed for total lead analysis (see Figure 1).

Sample Site	Depth
14	1.0 to 1.5 ft
	2.5 to 3.0 ft
15	1.0 to 1.5 ft
	2.5 to 3.0 ft
23	0.0 to 0.5 ft
	1.0 to 1.5 ft
	2.5 to 3.0 ft
24	0.0 to 0.5 ft
	1.0 to 1.5 ft
	2.5 to 3.0 ft

To evaluate whether other metals are present in soils at the site, four surficial (0.0 to 0.5) soil samples will be analyzed

for the eight RCRA metals using a total metals analytical protocol (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver). The four sample sites are 5, 6, 33 and 34 (see Figure 1). Soil from every other on-site and off-site sample locations will be collected and archived should any metal other than lead be found at an elevated concentration. If necessary, selected samples will then be analyzed for the elevated parameter to evaluate its areal distribution and concentration.

2.2 Off-Site Sampling

Previous off-site samples (9, 10, 16, 17, 18, and 19) were collected from the upper one foot of soil. To complete the delineation of lead concentrations on the residential properties behind the C&D facility, the following sampling sites and depths are proposed for total lead or EP Toxicity (8 metals) analyses as listed (see Figure 1):

Previous Surficial Sampling Sites	Depth
9	0.0-0.5 (EP Tox. - 8 metals)
	1.0-1.5
	2.5-3.0
10	0.0-0.5 (EP Tox. - 8 metals)

		1.0-1.5
		2.5-3.0
	16	0.0-0.5 (EP Tox. - 8 metals)
		1.0-1.5
		2.5-3.0
	17	1.0-1.5
		2.5-3.0
	18	1.0-1.5
		2.5-3.0
	19	0.0-0.5 (EP Tox. - 8 metals)
		1.0-1.5
		2.5-3.0

New Sampling Sites

	25	0.0-0.5
		1.0-1.5
		2.5-3.0
	26	0.0-0.5
		1.0-1.5
		2.5-3.0
	27	0.0-0.5
		1.0-1.5
		2.5-3.0
	28	0.0-0.5
		1.0-1.5

	2.5-3.0
29	0.0-0.5
	1.0-1.5
	2.5-3.0
30	0.0-0.5
	1.0-1.5
	2.5-3.0
31	0.0-0.5
	1.0-1.5
	2.5-3.0
32	0.0-0.5
	1.0-1.5
	2.5-3.0
36	0.0-0.5
	1.0-1.5
37	0.0-0.5
	1.0-1.5
38	0.0-0.5
	1.0-1.5

In addition to the off-site soil samples listed above, five additional off-site soil samples will be collected to establish local background metal concentrations. The samples will be collected from 0.0 to 0.5 ft. Three samples will be collected

from the bordering residential front yards and the other two will be collected from the church property northeast of the site on Baitz Street. Three of the five background samples will be analyzed for the 8 RCRA metals (total metals). The remaining two will be analyzed for just total lead.

2.3 Soil Sampling Procedures

All on and off-site soil samples will be collected using a stainless steel hand auger and stainless steel trowels. Prior to the collection of the first sample and between all samples, the equipment will be decontaminated using the following procedure:

- Algonox (biodegradable lab soap) solution scrub with tap water rinse
- 10% nitric acid solution rinse
- distilled/deionized water rinse

Following collection, samples will be homogenized in a stainless steel mixing bowl followed by selection of a representative portion of sample for transfer to lab cleaned jars. Samples will be shipped for overnight delivery in chilled coolers to the laboratory using chain-of-custody procedures.

EnviroTest Laboratories of Newburgh, New York will provide analytical services on this project.

3.0 GROUND WATER SAMPLING

During ERM's previous investigation, a ground water sample was analyzed from the well installed at location A. The sample, which was filtered in the field, was not found to contain any lead (<0.04 ppm). To evaluate ground water at the site currently, this well will be resampled. Two samples will be collected for analysis; one will be filtered and one will be unfiltered. Both samples will be analyzed for all eight RCRA metals. The results from these samples will be discussed with NYSDEC and the need for further ground water evaluation will be determined.

4.0 PROJECT COORDINATION

NYSDEC Region 9 will be notified two weeks prior to the initiation of field work. NYSDEC representatives on-site will split all samples with ERM. Following the receipt of laboratory results, a summary report will be prepared that presents all data generated during the sampling program. The report and remedial alternatives for the C&D Power Systems facility will be discussed with NYSDEC at that time.

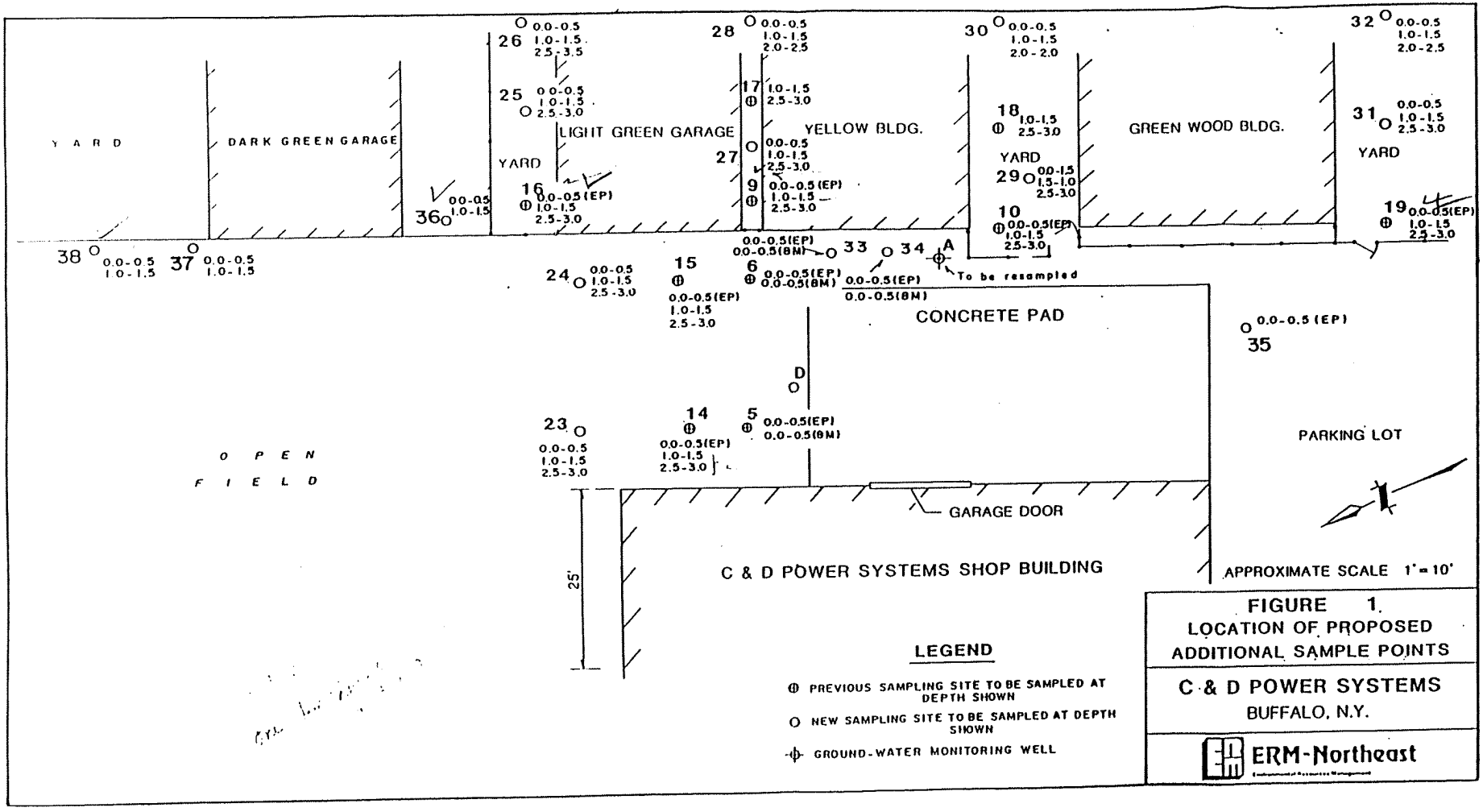


FIGURE 1.
LOCATION OF PROPOSED ADDITIONAL SAMPLE POINTS

C & D POWER SYSTEMS
BUFFALO, N.Y.

ERM-Northeast

15 (12-75)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Abul Barkat, Senior Engineer, Region 9
FROM: James Moras, Assistant Engineer, Western Remedial Action Section B James A. Moras
SUBJECT: C & D Power, Site No. 9-15-134, Erie County

DATE: JUL 07 1987

I have reviewed C & D Power's most recent submittal. This "Proposed Environmental Sampling Plan", dated June 26,1987, was to address concerns which were raised in your letter to Ms. Pamela Reich, dated March 31,1987. The following concerns have not been sufficiently resolved:

1) C & D has been making assumptions concerning groundwater in the area using data from one well. This is an insufficient data base, however they do not plan on the addition of any new wells.

2) The proposed soil sampling plan will not properly define the areal extent of the contamination. Specifically, from the December, 1985 report, sample #16 (northeast of concrete pad, lead concentration in soil of 5070 ppm) and sample #19 (southeast of concrete pad, lead concentration in soil of 1935 ppm) could not be considered to clearly define the north or south limits of the lead contamination in the soil. Yet no further testing is proposed in these areas.

3) The rationale for the locations of the EP Toxicity testing is not understood by this office. The proposed EP Tox tests are in areas of high surface contamination (ie. sample 5= 1906 ppm lead; sample 6= 4305ppm lead; sample 14= 6182 ppm lead; and sample 15= 5404 ppm lead). There is no argument over the placement of these locations for the EP Tox sampling. However, C & D Power does not propose to sample in the areas of the following samples: sample 7= 2860 ppm lead; sample 8= 2466 ppm lead; sample 16= 5070 ppm lead; sample 19= 1935 ppm lead. the proposed sampling plan needs to be either revised or justified.

Although these points were previously mentioned, C & D Power has failed to address them. To expedite matters it may be necessary to hold a meeting between C & D Power and our offices.

If you have any questions please contact me at 518-457-0315.

cc: J. Willson
C. Allen
J. Tygert, Reg. 9

New York State Department of Environmental Conservation

MEMORANDUM

TO: John S. Tygert, Supervisor, Division of Solid and Hazardous Waste
FROM: Christopher P. Allen, Supervisor, Western Remedial Section B
SUBJECT: C&D Power Systems
DATE: MAR 11 1987

On February 24, 1986, this Office received a soil investigation report for the above mentioned site. Analytical results of soils at this site showed significant lead contamination. On Page 4-1 of the report, a supplemental soil sampling plan was discussed. To date, there has been no information on whether this program was carried out, and if so, what the results were. If there is any additional information, please send a copy to this office.

The soil investigation report, mentioned above, presented contaminant levels which need some attention. Lead concentrations in surface soils on-site were as high as 40,000 ppm while soils collected on private residential property had lead contamination as high as 1935 ppm. On Page 3-1, a value of 483 ppm is presented as a local background concentration for lead. Data from a 1985 EPA report presented background levels up to 290 ppm for lead in the soils for the Buffalo area, with the average being 120 ppm. On this basis, the value of 483 ppm as background for lead is questionable.

The consultant who prepared the soil investigation report, ERM-Northeast, recommended further soil sampling followed by the excavation of contaminated soils. If it can be proven that all of the contamination will be removed, and there has been no off-site migration or groundwater contamination, this approach would lead to a successful remediation. Issues which will have to be addressed are: 1) What levels of contamination will be considered "clean", and 2) a post remediation monitoring program to confirm the effectiveness of the remedial action (to include soil as well as groundwater testing).

As already stated, this site has significant lead contamination present in the soil. This site should be listed in the New York State Registry of Inactive Hazardous Waste Sites as soon as possible.

If you have any questions, please contact either myself or James Moras, of my staff, at (518) 457-0315.

0011 - C
02-8702-23

NUS CORPORATION — TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8702-23	2/13/87	10:00

DISTRIBUTION:

LAND RECLAMATION

BETWEEN:	OF:	PHONE:
ROBERT FULLER	ERIE Co HEALTH DEPT. / LANCASTER OFFICE ~~MAIN OFF~~	(716) 683-6487

AND:

DENISE HORGAN (NUS)

DISCUSSION:

RE: To Mr. Fuller's knowledge residents use the municipal water supply for drinking purposes. He does not know of or have any record of groundwater wells. If there are any he theorizes that the residents would use the well water to wash their cars or water their lawns.

ACTION ITEMS:

02-8710-93

C&D POWER SYSTEMS

Lat: 42°52'30"N Long: 78°49'50"W

Data List of Dataset: NYCA Number of Records = 6

REC #	POP	HOUSE	DISTANCE	SECTOR
1	0	0	0.400000	1
2	3650	1331	0.810000	1
3	9,038 5388	3544 2213	1 1.60000	1
4	89,165 80127	35,210 31666	2 3.20000	1
5	178,755 89590	68,776 33566	3 4.80000	1
6	295,600 116845	115,925 47149	4 6.40000	1

Mr. Christopher Allen
Mr. Abul Barkat
C & D Power System, Scoville Avenue Site

July 1, 1987

Enclosed is the Revised Investigation Plan submitted by C & D Power.

The company plans to perform the investigation by the end of July 1987. Please review the plan and provide your comments to us.

cc: Mr. Peter Buechi
Mr. John Tygert

AB:jps

Enc.

C&D POWER SYSTEMS, INC.

PR-214/vh
Manufacturing Engineering

3043 Walton Road
Plymouth Meeting, PA 19462
Telephone (215) 828-9000
Teletype: 510-660-8436

June 26, 1987

Mr. Abul Barkat, P.E.
Senior Sanitary Engineer
N.Y. Department of Environmental Convservation
600 Delaware Avenue
Buffalo, NY 14202-1073

RE: C & D Power Systems, Inc., Scoville Avenue Site

Dear Mr. Barkat:

Attached you will find a Revised Investigation Plan as prepared by Mr. Craig Werle of ERM for the above referenced site. The plan is based primarily upon the recommended sampling plan presented in ERM's previous report and incorporates comments received from your office.

Mr. Werle has advised me that ERM may have a crew available toward the end of July to perform the sampling. We intend to proceed with this project as rapidly as possible and will do so unless we hear otherwise from NYDEC within the next few weeks. We will notify your office when the actual start date is determined.

If you have any questions, please do not hesitate to contact me.

Very truly yours,

Pamela J. Reich

Pamela J. Reich, Manager
Environmen, Safety, & Health

PJR/vh

ERM-Northeast

PROPOSED ENVIRONMENTAL SAMPLING PLAN
C & D POWER SYSTEMS
SALES OFFICE
BUFFALO, NEW YORK

JUNE 1987

PREPARED FOR:

C & D POWER SYSTEMS

PREPARED BY:

ERM-NORTHEAST
88 SUNNYSIDE BOULEVARD
PLAINVIEW, NEW YORK 11803

1.0 INTRODUCTION

This document presents the recommended Environmental Sampling Plan for the C&D Power Systems, Scoville Avenue, Sales Office site in Buffalo, New York. The primary objective of the sampling plan is to complete the delineation of lead concentrations in the soils surrounding the concrete pad at the rear of C&D facility. A preliminary sampling program was conducted by ERM-Northeast in August, 1985, and documented in ERM's report "Soil Quality Investigation, C&D Power Systems, Buffalo, New York Sales Office."

The sampling plan contained in this submittal is largely based on the recommended sampling plan presented in ERM's previous report. Modifications have been made reflecting NYSDEC Region 9 comments contained in their letter of March 31, 1987 and subsequent telephone conversations between ERM and Mr. Abul Barkat of NYSDEC.

The specific objectives of the sampling plan include the following:

1. Complete the horizontal and vertical delineation of lead contamination in soils on residential properties located behind the C&D facility.

2. Complete the horizontal and vertical delineation of lead contamination in on-site soils north and northeast of the pad.

3. Complete the delineation of on-site soils adjacent to the north and northeast side of the pad that contain EP Toxicity Test lead concentrations above 5.0 mg/l.

4. Establish local background lead concentrations in soil through the collection and analysis of off-site soil samples.

5. Resample the existing monitoring well to determine whether ground water impacts exist and whether additional monitoring wells are required.

The data collected from the proposed sampling program will be used to develop a remedial action plan for the site. If significant data gaps still exist following completion of the sampling plan, supplemental sampling may be proposed and reviewed with NYSDEC.

2.0 SOIL SAMPLING PLAN

2.1 On-Site Sampling

Based on the results of ERM's investigation, additional on-site sampling appears to be warranted on the north and northeast sides of the pad to complete the areal and vertical delineation of total lead and EP Toxic lead concentrations. Previously surficial samples (0.0 to 1.0 feet) from points A and D as shown on Figure 1 were analyzed for lead using EP Toxicity test procedures. The sample from D exceeded 5.0 ppm and it was assumed that soils in the upper foot within three feet of the north side of the pad were hazardous. To complete the delineation of the hazardous soils the following sampling sites are proposed as shown on Figure 1:

Sample Site	Depth	Analyses
Site 5	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 6	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 14	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 15	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 33	0.0 to 0.5 ft	EP Tox. (8 metals)
Site 34	0.0 to 0.5 ft	EP Tox. (8 metals)

Previous total lead sampling results from below one foot at sites A, D, 5 and 6 were uniformly below 1,500 ppm. It is highly unlikely that these soils would exceed EP Toxicity concentration limits so deeper EP Toxicity samples do not appear to be justified.

To complete the areal and vertical delineation of total lead concentrations on-site, the following sample sites and depths are proposed for total lead analysis (see Figure 1).

Sample Site	Depth
14	1.0 to 1.5 ft
	2.5 to 3.0 ft
15	1.0 to 1.5 ft
	2.5 to 3.0 ft
23	0.0 to 0.5 ft
	1.0 to 1.5 ft
	2.5 to 3.0 ft
24	0.0 to 0.5 ft
	1.0 to 1.5 ft
	2.5 to 3.0 ft

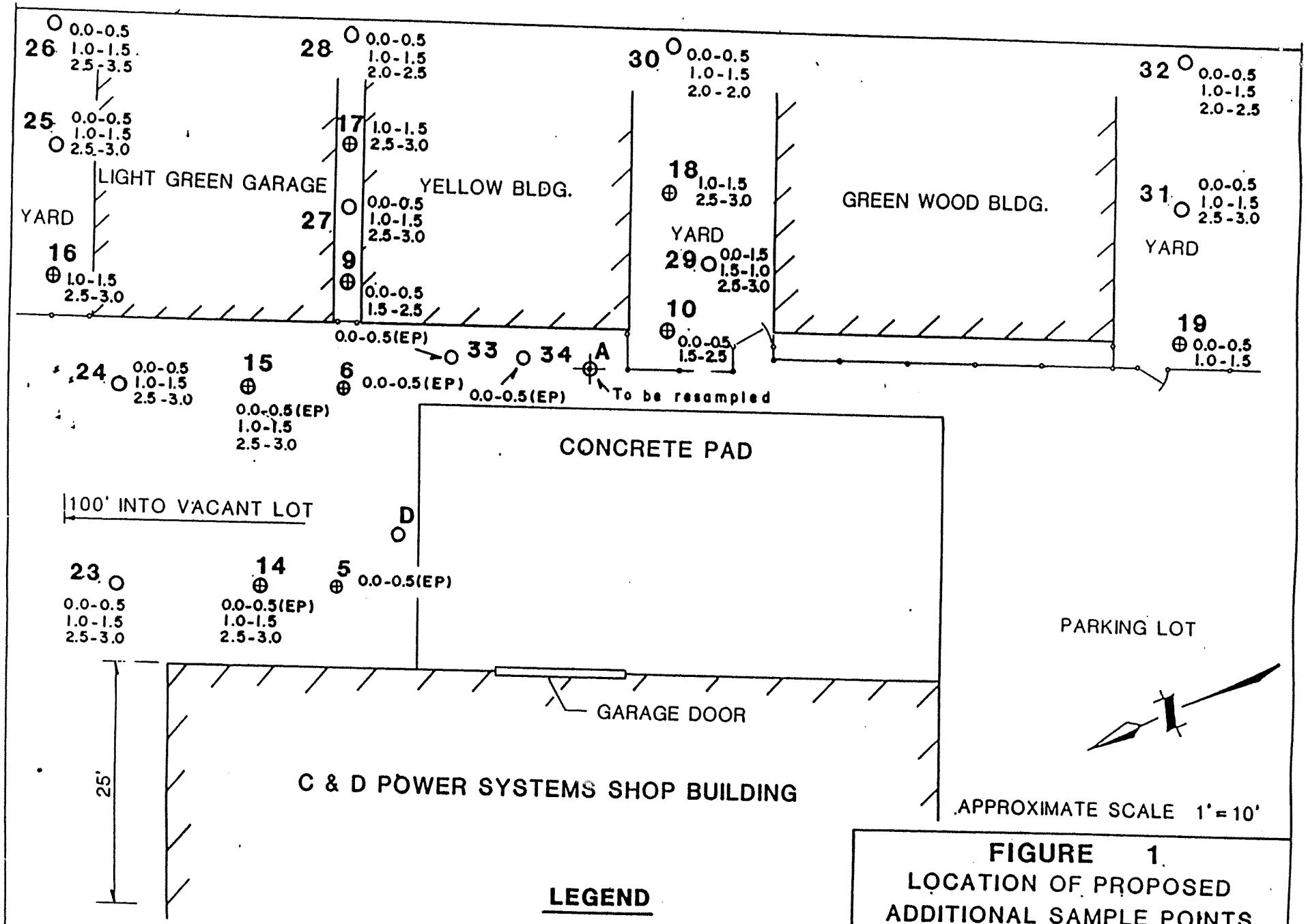


FIGURE 1
LOCATION OF PROPOSED ADDITIONAL SAMPLE POINTS

C & D POWER SYSTEMS
BUFFALO, N.Y.

ERM-Northeast

2.2 Off-Site Sampling

Previous off-site samples (9, 10, 16, 17, 18, and 19) were collected from the upper one foot of soil. To complete the delineation of lead concentrations on the residential properties behind the C&D facility, the following sampling sites and depths are proposed for total lead analysis (see Figure 1):

Previous Surficial Sampling Sites	Depth
9	1.0-1.5
	2.5-3.0
10	1.0-1.5
	2.5-3.0
16	1.0-1.5
	2.5-3.0
17	1.0-1.5
	2.5-3.0
18	1.0-1.5
	2.5-3.0
19	1.0-1.5
	2.5-3.0

New Sampling Sites

25	0.0-0.5
	1.0-1.5
	2.5-3.0
26	0.0-0.5
	1.0-1.5
	2.5-3.0
27	0.0-0.5
	1.0-1.5
	2.5-3.0
28	0.0-0.5
	1.0-1.5
	2.5-3.0
29	0.0-0.5
	1.0-1.5
	2.5-3.0
30	0.0-0.5
	1.0-1.5
	2.5-3.0
31	0.0-0.5
	1.0-1.5
	2.5-3.0
32	0.0-0.5
	1.0-1.5
	2.5-3.0

In addition to the 36 off-site soil samples listed above, five additional off-site soil samples will be collected to establish local background lead concentrations. The samples will be collected from 0.0 to 0.5 ft. Three samples will be collected from the bordering residential front yards and the other two will be collected within one block of the site.

2.3 Soil Sampling Procedures

All on and off-site soil samples will be collected using a stainless steel hand auger and stainless steel trowels. Prior to the collection of the first sample and between all samples, the equipment will be decontaminated using the following procedure:

- Algonox (biodegradable lab soap) solution scrub with tap water rinse
- 10% nitric acid solution rinse
- distilled/deionized water rinse

Following collection, samples will be homogenized in a stainless steel mixing bowl followed by selection of a representative portion of sample for transfer to lab cleaned jars. Samples will be shipped for overnight delivery in chilled coolers to the laboratory using chain-of-custody procedures.

EnviroTest Laboratories of Newburgh, New York will provide analytical services on this project.

3.0 GROUND WATER SAMPLING

During ERM's previous investigation, a ground water sample was analyzed from the well installed at location A. The sample, which was filtered in the field, was not found to contain any lead (<0.04 ppm). To evaluate ground water at the site currently, this well will be resampled. Two samples will be collected for analysis; one will be filtered and one will be unfiltered. Both samples will be analyzed for all eight RCRA metals. The results from these samples will be discussed with NYSDEC and the need for further ground water evaluation will be determined.

4.0 PROJECT COORDINATION

NYSDEC Region 9 will be notified two weeks prior to the initiation of field work. NYSDEC representatives on-site will be provided the opportunity to split samples with ERM. Following the receipt of laboratory results, a summary report will be prepared that presents all data generated during the sampling program. The report and remedial alternatives for the C&D Power Systems facility will be discussed with NYSDEC at that time.

15 (12-75)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Abul Barkat, Division of Solid and Hazardous Waste, Region 9
FROM: James A. Moras, Assistant Sanitary Engineer, Western Remedial Section B
SUBJECT: C & D Power

James A. Moras

DATE: April 21, 1987

I recently reviewed C & D Power's April 3, 1987 submission. Certain issues of their proposed program need more attention then C & D has presented in their investigation/remedial plan. Many of these issues have already been addressed in Mr. Tygert's March 31, 1987 letter to C & D Power, but I will discuss them again to re-emphasize their importance.

The groundwater sampling which has been performed at this site is not extensive enough to make any kind of conclusions about groundwater flow patterns or contaminant migration from this site.

In addition, when C & D took their groundwater sample, they filtered it prior to analysis. It is Department policy to sample for total metals which is not possible if the groundwater is filtered. The additional analytical parameters mentioned in Mr. Tygert's letter should also be analyzed for in future groundwater sampling.

The main topic of concern is establishing a criteria for excavation of the lead contaminated soils. The high lead levels in the soils on-site as well as off-site will require additional attention. Discussions between our offices are necessary so that an agreed upon action level can be established as soon as possible.

If you have any questions, please contact me at (518) 457-0315.

cc: J. Willson
C. Allen

File - Abul

Mr. Christopher Allen
Mr. Abul Barkat
C & D Power System, Scoville Avenue Site

April 8, 1987

In addition to the C & D submittal dated February 28, 1986, enclosed is the company's plan for the site closure.

Please review the plan and provide your comments to us. C & D's response to our letter dated March 31, 1987 which included our comments to their earlier submittal is still awaited.

cc: Mr. Ronald Tramontano (w/enc.)
Mr. John Tygert

AB:jps

Enc.

C&D
POWER SYSTEMS, INC.

3043 Walton Road
Plymouth Meeting, PA 19462
Telephone (215) 828-9000
Teletype: 510-660-8436

April 3, 1987

Mr. Adul Barkat
Senior Sanitary Engineer
New York Department of
Environmental Conservation
600 Delaware Avenue
Buffalo, NJ 14202

Re: C & D Power Systems, Inc.
45 Scoville Avenue
Buffalo, NJ 14206
NY0085686426

Dear Mr. Barkat:

Pursuant to our telephone conversation I am submitting our detailed decontamination plan for the remediation of the above referenced facility. As your are aware, a thorough sampling survey was conducted on the site and our decontamination plan is based largely on this information. Off-site contamination was identified in the consultant's assessment. Additional sampling will be required to delineate the procedures necessary, if any, on the neighboring properties.

C & D Power Systems, Inc. discontinued operations at the site at the end of 1985 but retains ownership. The current inhabitant of the site is one of our independent sales agents who leases the building from us. We are negotiating with this agent to have him move out of the building this spring so that we can begin the necessary remedial work. C & D will not sell the property until the decontamination is completed and NYDEC has approved the procedures.

Sincerely,

Pamela J. Reich

Pamela J. Reich, Manager
Environment, Health & Safety

PJR/pl
PR-189

cc: J. Gunder
J. Shor-Feit & Ahrens

DECONTAMINATION AND CLOSURE PLAN
BUFFALO, NEW YORK SALES FACILITY
45 SCOVILLE AVENUE
BUFFALO, N.Y. 14206
EPA ID #NYDO85686426

REF:Soil Quality Investigation, ERM - Northeast, December 1985

BACKGROUND INFORMATION AND DELINEATION OF CONTAMINATION

The above referenced hydrogeological survey identified contamination of soil with lead at levels above normal background for the area on the C & D property. Off-site, on bordering residential properties, some surface contamination was also identified. For purposes of clarification the proposed remedial activities for on-site and off-site contamination will be addressed separately.

On-Site Contamination Excavation and Sampling

Soil lead contamination above background was identified over an area of approximately 810 square feet. The elevated concentrations of lead (Total Lead) were found to be retained within the top two feet of soil. Only a portion of this contaminated soil was found to be EP Toxic. As proposed in the ERM recommendations, C & D Power Systems intends to excavate these areas as described by Figure 4-2 to a depth of 2.5 to 3 feet. In addition, because the concrete pad at the rear of the building is no longer intact and sampling identified some lead contamination beneath it, C & D will remove the pad and excavate the underlying soil to a depth of 2.5 feet.

Following excavation, C & D or an independent contractor of C & D, will resample these areas to verify that the contamination has been totally removed. Following confirmation, the excavation will be covered with clean fill and seeded. An independent engineer will be called into the project prior to the start of excavation to observe the process and provide confirmation that C & D follows the procedures agreed upon by the DEC and C & D.

The ERM assessment determined that the local groundwater has not been impacted. C & D does not plan to perform any more groundwater sampling unless requested to do so by NYDEC. Unless otherwise instructed by DEC, C & D will remove and or cap the sampling well(s) at the time of excavation.

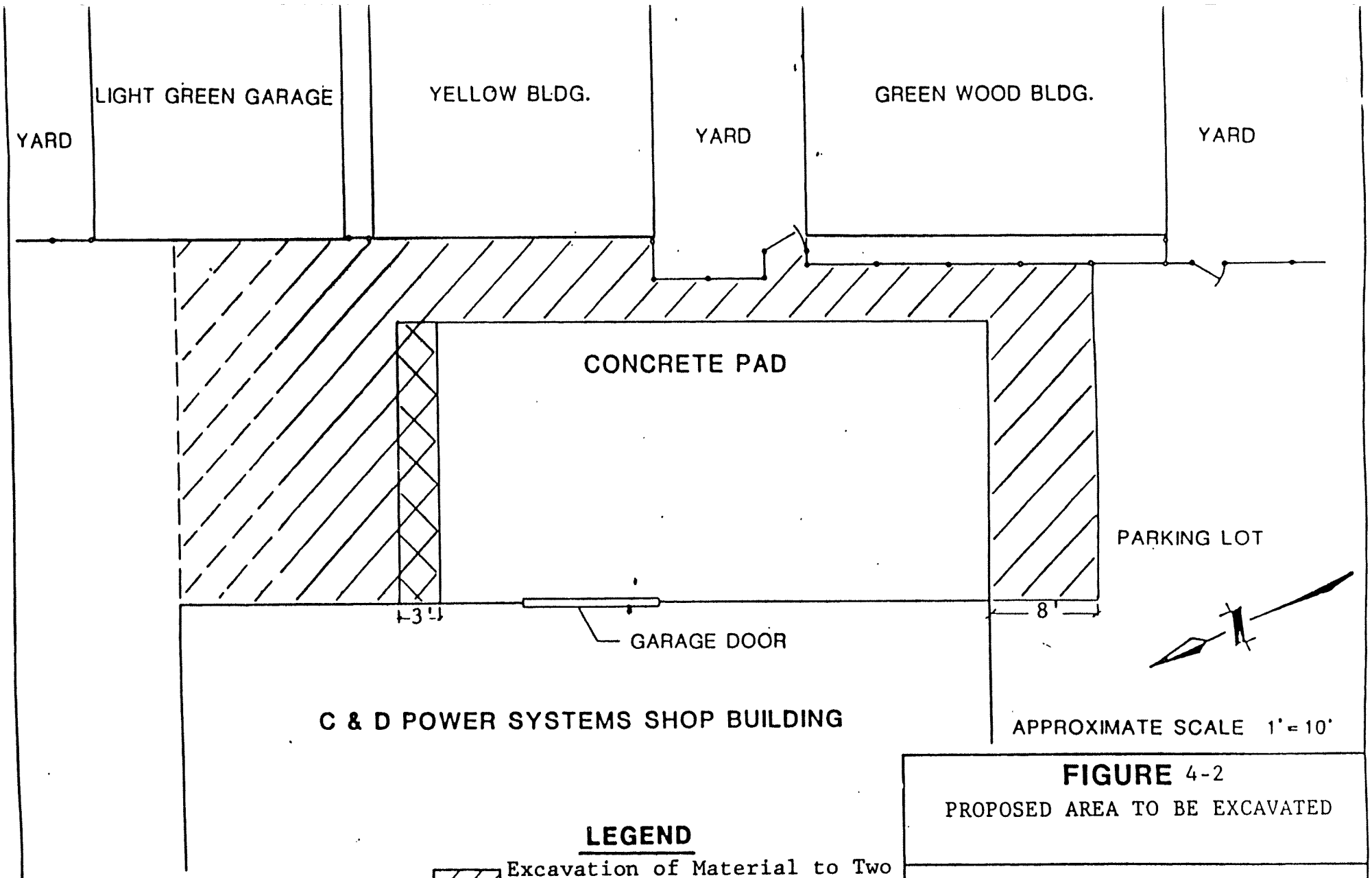


FIGURE 4-2

PROPOSED AREA TO BE EXCAVATED

C & D POWER SYSTEMS

BUFFALO, N.Y.

ERM-Northeast

Off-Site Contamination and Sampling

The ERM survey detected some soil lead contamination above background levels on some of the adjoining private properties at the rear of the building. On this first phase of the site assessment, only cursory sampling was performed for the purpose of identifying if a problem existed. Additional sampling on these properties is warranted to delineate the extent of contamination and to develop an excavation plan if necessary.

As shown in Figure 4-1, additional sampling will be conducted on the private properties to a depth of 3 feet and extending into the properties sufficiently to determine the extent of contamination. In addition, samples will be taken in the front yards of these properties to be used as indicators of the background soil lead levels. Pending the results of this sampling, C & D will obtain permission from the property owners to excavate the contaminated soil and refill and sod as needed. As with the on-site excavation, effective removal of the contamination will be confirmed by sampling after excavation and prior to filling. An independent engineer will be present to observe and certify that the proper procedures were followed.

Laboratory Analyses

All analyses will be conducted by Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA., an accredited and certified laboratory for the analysis of water and hazardous materials. Copies of the original analysis reports will be attached to the final closure/ decontamination report to the NYDEC.

Waste Disposal

All contaminated soil that is excavated will be loaded into bulk containers (roll-offs) and shipped off-site for disposal at a secure chemical landfill approved by C & D Power Systems and the NYDEC. C & D holds a corporate contract with CECOS International and this would be our preferred disposal site for this location. The excavated soil will be moved off-site as soon as possible and will not be held on-site.

Reporting

During the performance of this remedial plan, C & D Power Systems will provide progress reports to the NYDEC in writing. At the completion of the project, C & D will submit to the NYDEC a full report including, but not limited to, a detailed description of the procedures used, sampling methods, all data reports, and a certification by an independent local engineer that the procedures were properly conducted and the remedial plan has been completed.

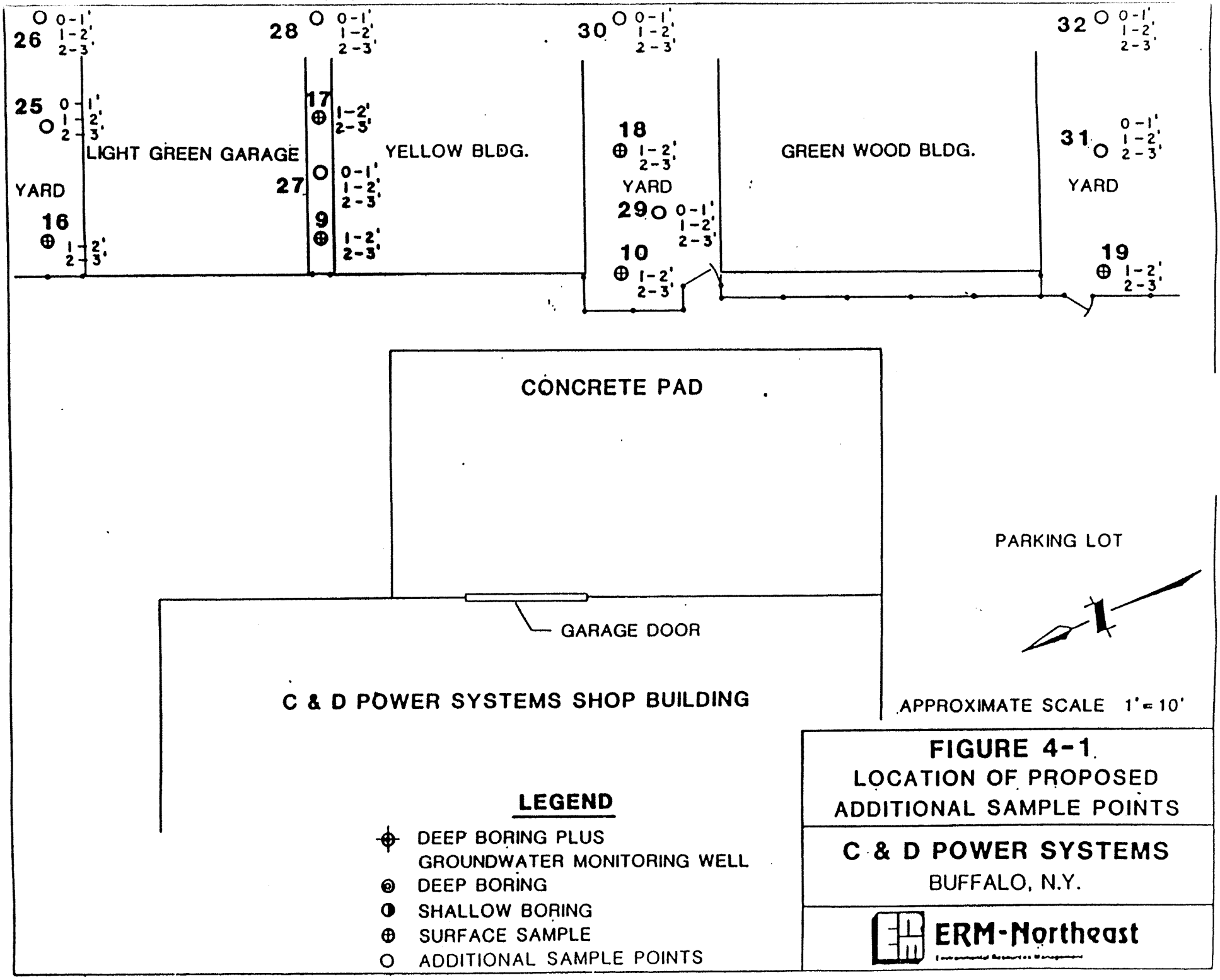


FIGURE 4-1
LOCATION OF PROPOSED ADDITIONAL SAMPLE POINTS

C & D POWER SYSTEMS
BUFFALO, N.Y.

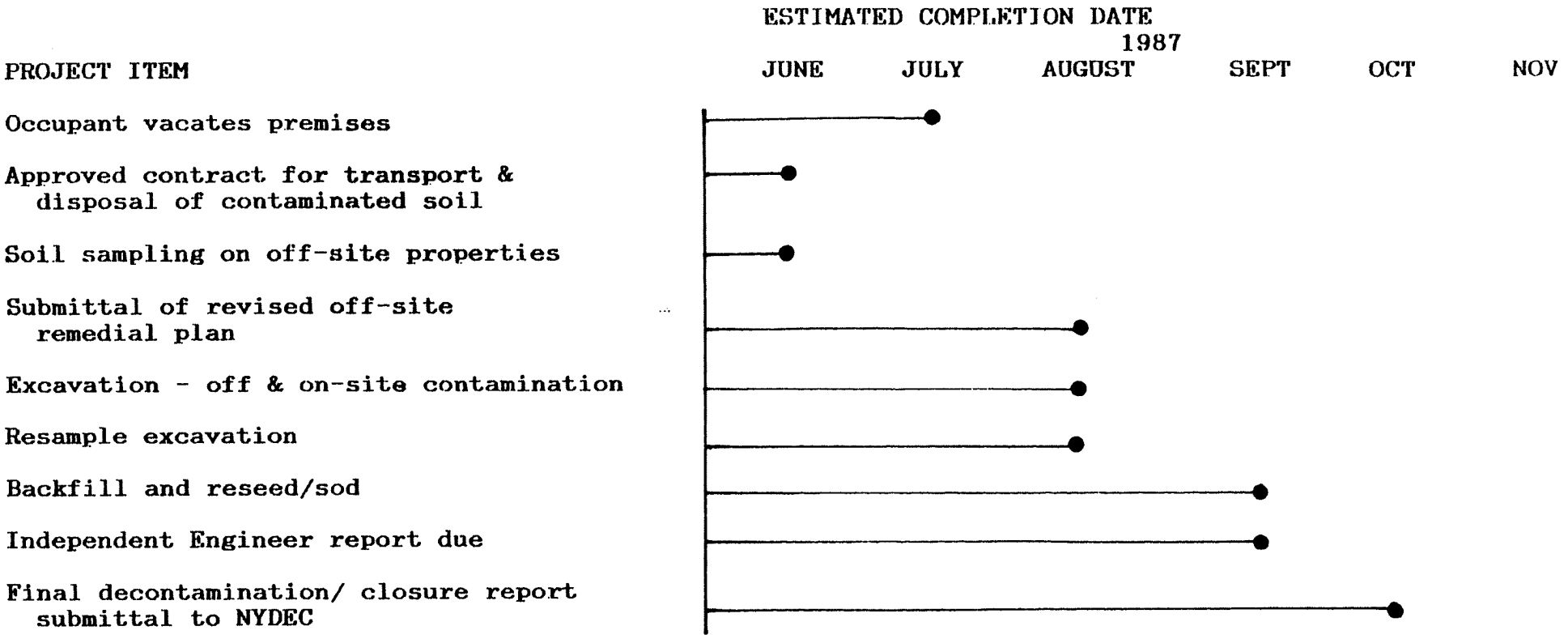
ERM-Northeast

Site Availability

The Buffalo site is currently occupied by an independent sales agent of C & D Power Systems, Inc. who is leasing the property while building a new office at another location. C & D retains ownership of the site and will not sell the property until the remedial work is completed and the NYDEC has approved the procedures used. The current occupant is scheduled to vacate the premises during the summer of 1987 (July). In the meantime, the lease agreement incorporates a rider which prohibits outside storage or handling of hazardous materials. Because of the extent of excavation required on-site and the fact that C & D would like to thoroughly clean the site, including the interior of the building, and avoid recontamination, we have not proceeded with any of the remediation activity beyond assessment to-date. Our intent at this point is to begin excavation immediately after the agent vacates and to conduct the entire project within as short a time frame as possible. Our estimated project completion time from start to finish is 3 months, including the retesting and filling of the excavation.

A project timeline appears as Figure 4-3 which shows the estimated sequence of events for the work as identified at this point in time.

BUFFALO SALES OFFICE DECONTAMINATION - CLOSURE



15 (12-75)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Mr. Charles Goddard
FROM: Mr. John Tygert
SUBJECT: Allied C & D Power Scoville Avenue Site
Addition to the Registry of Inactive Hazardous Waste Disposal Sites
DATE: March 30, 1987

The subject site is required to be added to the Registry of Inactive Hazardous Waste Disposal Sites.

The necessary papers including Site Summary Form and EPA Preliminary Assessment Form have been completed and are enclosed.

cc: Mr. Peter Buechi
Mr. Abul Barkat

Enc.

Add X
Modify
Reclassify
Delist

ADDITIONS/CHANGES TO REGISTRY OF
INACTIVE HAZARDOUS WASTE DISPOSAL SITES

Site Name Allied C&D Power System DEC ID Number 915134

Site Address 45 Scoville Avenue, Buffalo County Erie

X Add New Site: (Potential Hazardous Waste Site Summary Form, EPA Preliminary Assessment Form and Registry Form must be completed and attached)

___ Modify data as follows:

___ Reclassify from class ___ to class ___
Justification:

___ Delist:
Justification:

Prepared by: Abul Barkat Date: 3/30/87

Approved by:

Regional Hazardous Waste Engineer: [signature] Date: 3/30/87

Robert Olazagasti, Supervisor [signature] Date:

Charles Goddard, Bureau Chief Charles Goddard Date: 4/7/87

cc: Region
Department of Health

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: 2a REGION: 9 SITE CODE: _____
EPA ID:
NAME OF SITE : C&D Power Scoville Avenue Site
STREET ADDRESS: 45 Scoville Avenue,
TOWN/CITY: Buffalo COUNTY: Erie ZIP: _____

SITE TYPE: Open Dump X Structure- Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: 1/4 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: C&D Power Systems
CURRENT OWNER ADDRESS.: 3043 Walton Road Plymouth Meeting, PA 19462
OWNER(S) DURING USE...: C&D Power System's
OPERATOR DURING USE...: C&D Power Sysyems
OPERATOR ADDRESS.....: Same as above
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1969 To 1985

SITE DESCRIPTION:
The site was used for storage and refurbishing of Industrial batteries. Past plant operating practices included washing of batteries on an outdoor and unbermed concrete pad at the rear of the facility. During 1985 C&D Power investigated the site for lead contamination. Surface soil samples collected between the pad and adjacent properties indicated lead concentration as high as 40,000 ppm. Adjacent residential properties are also affected. Soil samples from these properties indicated precence of lead over 1000 PPM.

HAZARDOUS WASTE DISPOSED: Confirmed-X Suspected- unknown
TYPE QUANTITY (units)

Washings from Industrial batteries, mainly lead and probably other metals.

SITE CODE:

ANALYTICAL DATA AVAILABLE:
Air- Surface Water- Groundwater X Soil X Sediment- None-

CONTRAVENTION OF STANDARDS:
Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION: NONE

TYPE...: State- Federal-
STATUS: In Progress- Completed-

REMEDIAL ACTION:

Proposed- X Under design- In Progress- Completed-
NATURE OF ACTION: Excavation and off site Disposal of contaminated soil

GEOTECHNICAL INFORMATION: Depth to bed rock 8½ ft from ground.
SOIL TYPE: Sand sandy silt and clay in the overburden over bed rock
GROUNDWATER DEPTH: 5 feet

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
High concentration of lead in the surface soil is a potential threat for direct exposure. Further investigation and remedial action is warranted.

ASSESSMENT OF HEALTH PROBLEMS:

Medium	Contaminants Available	Migration Potential	Potentially Exposed Population	Need for Investigation
Air				
Surface Soil				
Groundwater				
Surface Water				

Health Department Site Inspection Date:

MUNICIPAL WASTE ID:

ICS ID:

SPEDES ID:

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: XXXX | 02 SITE NUMBER:

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE: _____) X POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potential for ground water contamination exists as soil samples failed EP Toxicity test.

01 X B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE: _____) X POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potential for surface water contamination exists.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Unknown

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Unknown

01 X E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE: _____) X POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potential for direct contact is high. Surface soil indicated high lead concentration

01 X F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: Unknown (Acres)
02 ☐ OBSERVED (DATE: _____) X POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
LEAD WAS FOUND IN A concentrion of 40,000 PPM in surface soil.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Unknown

01 X H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE: _____) X POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The site is commercial/industrial as well as residential. Potential for exposure is high.

01 X J. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) X POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potential for exposure is high.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: XXXX | 02 SITE NUMBER:

II. HAZARDOUS CONDITIONS AND INCIDENTS (continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION
Un Known
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (Include names(s) of species)
Un Known
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION
Un Known
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/runoff/standing liquids/leaking drums)
03 POPULATION POTENTIALLY AFFECTED _____
04 NARRATIVE DESCRIPTION
Un Known
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION
Un Known
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION
Potential for contamination exists
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION
Un Known
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
Un Known

III. TOTAL POPULATION POTENTIALLY AFFECTED: Un Known

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
C & D Power Systems - Soil Quality Investigation
December 1985