5.1.2

SUITE 4400 · 1001 FOURTH AVENUE PLAZA · SEATTLE, WASHINGTON 98154 · (206) 624-3600

Riddell, Williams, Bullitt & Walkinshaw

LAW OFFICES

RODNEY L. BROWN, JR.

December 16, 1991

Mr. David South
Washington Department of Ecology
Northwest Regional Office
3190 - 160th Ave. S.E.
Bellevue, WA 98008

Re: Landsburg Mine Site

Dear Dave:

Enclosed please find a copy of Chempro's final report on the drum removal project. I do not know whether Chempro has sent you a copy of this report yet, but I thought that you would find it interesting. Please give me a call if you have any questions about it.

With best regards.

Sincerely,

Rod

Rodney L. Brown, Jr.

RLB/ces

Enclosure

C:\RLB\5979\001\SOUTH.LTR

TELEX RCA 296338 RWBW UR · FACSIMILE (206) 389-1708

BELLEVUE OFFICE
2100 SECURITY PACIFIC PLAZA · 777 108TH AVENUE N.E. · BELLEVUE, WASHINGTON 98004
(206) 462-4500 · FACSIMILE (206) 462-4501

BURLINGTON
ENVIRONMENTAL

REPORT ON THE

LANDSBURG MINE DRUM REMOVAL

PROJECT

August 20 to October 30, 1991

Prepared for

The Landsburg Mine PRP Group

by

Burlington Environmental, Inc.
Seattle Field Service Division

December 10, 1991

Burlington Environmental Inc.
7440 West Marginal Way South • Seattle, WA 98108
(206) 682-4898 • FAX: (206) 233-0869

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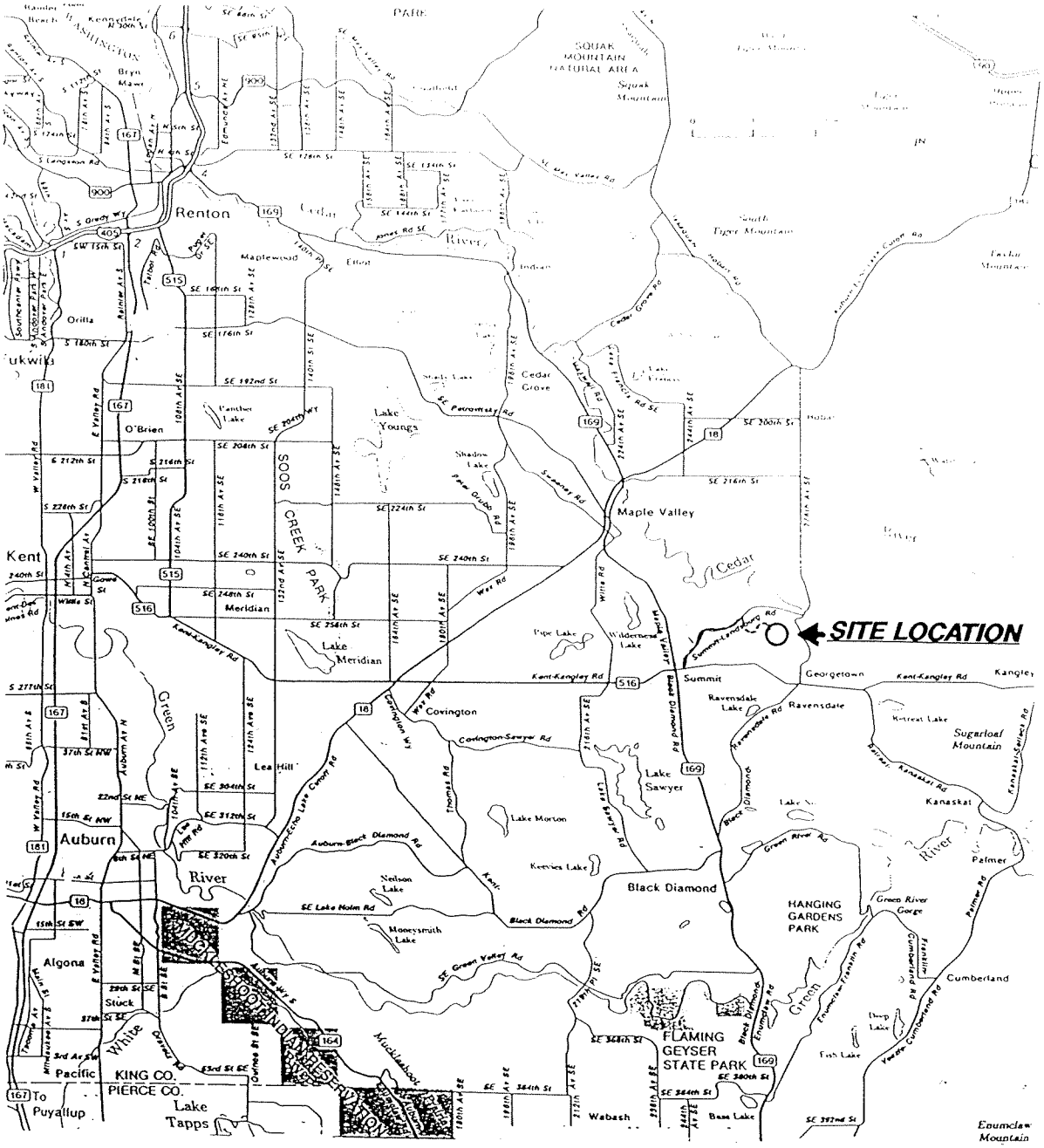


BURLINGTON ENVIRONMENTAL INC.

Landsburg Mine

Drum Removal Project

LOCATION MAP

Landsburg Mine Drum Removal Project
Project Number 91S341

PROJECT REPORT

December 10, 1991

Introduction

The Landsburg site consists of a semi-continuous trench 20 to 60 feet deep, 60 to 100 feet wide, and nearly 3/4 of a mile long. The trench was formed by underground coal mining activities on the Rodgers Seam that caused surface subsidence and/or collapse. The mine operated from the 1940's until 1975.

In the late 1960's and early 70's, portions of the trench were used to dispose of hazardous materials, a practice that was condoned at the time. These materials consisted of miscellaneous industrial wastes contained in drums or dumped directly from tanker trucks. Also deposited in the trench were logging and demolition debris, tires, and miscellaneous household garbage. Dumping at the site continued intermittently until the mid 1980's.

Due to concerns that contamination from the site might pose long-term ground water and other environmental problems, the Washington State Department of Ecology sampled domestic water wells in the Landsburg area in 1990, and commissioned a site hazard assessment (SHA) study in February, 1991. The SHA confirmed that certain portions of the trench contained drums with heavy metals, cyanides, volatile and semivolitile organic compounds, and PCBs.

The DOE then requested potentially liable parties (PRPs) to perform an expedited response action to remove surficial drums and secure the site from unauthorized access. The PRP group (Chemical Processors, Inc., PACCAR Inc., Palmer Coking Coal Company, and Plum Creek Timber Company) awarded a contract to the Chempro Division of Burlington Environmental, Inc. to recover up to 65 drums and dispose of them and their contents at an approved RCRA facility. Prior to site activity, Chempro would prepare a site Health, Safety and Work Plan for approval by the PRP group and review by the DOE.

Site Health, Safety, and Work Plan

The Site Health and Safety Plan (HASP) which included a Comprehensive Work Plan was prepared and submitted for review and approval in mid-August, 1991. The plan called for overpacking and removal of drums from the trench using a 28 ton crane. Overpacked drums would be taken to a drum storage area and their contents sampled. Based upon sample

results, profiles would be prepared and the material taken off site for disposal. All drums were to be assessed prior to removal from the trench, and a log kept of each container that described its condition, contents, and location.

Initial Site Work

Chempro mobilized a crew to the site on August 20th to begin site preparation and setup activities. The crew consisted of a Project Manager, Supervisor, Equipment Operator, and two Technicians. A storage container, portable toilet, and decon stations, were set up on the site. Land was cleared for crane operations and access trails built to the drum locations. A bermed and lined drum storage area was constructed. The site was surveyed by compass and tape and a site map prepared (Figure 1).

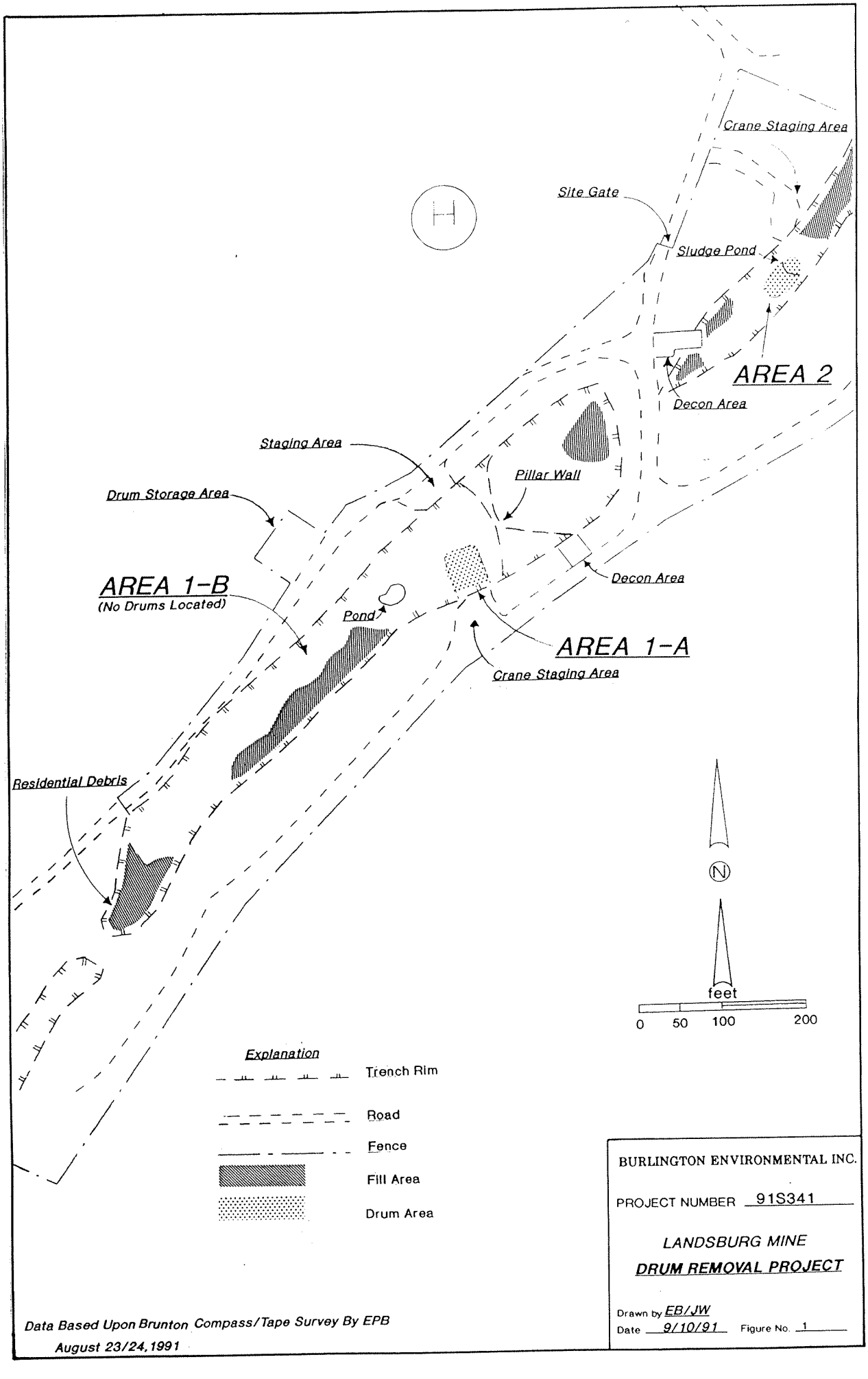
While Chempro was setting up, a fencing contractor began enclosing the site with 8 foot cyclone fence under an agreement with Palmer Coking Coal Company.

Area 2

Initial site assessment and drum recovery operations began on August 22nd in Area 2 (see Figure 1). Thirteen drums were found in two localities, informally named the "pond" and the "stump pile" (see Figure 2-A). The "pond" is an area of soft oily sludge about 24 feet in diameter in the bottom of the trench where water accumulates during wet months. The "pond" contained eleven drums in varying stages of deterioration. Ten were open top drums without lids lying on their sides with some of their contents spilled onto the ground. One drum containing sludge was a bung type with a ruptured top. Drum assessment was done in Level B PPE. It was observed that when the sludgey soil was disturbed, a 1 to 2 second spike of 500 to 700 ppm was recorded on the organic vapor analysis (OVA) meter. It was also observed that the sludge in the pond area was composed of various different colored layers probably representing episodic dumping of sludge from tanker trucks.

The stump pile consists primarily of logging and construction debris and soil located on the northwest bank of the trench just north of the "pond". The total length of the pile is about 350 feet and it varies in width from 15 to 60 feet. Depth of the pile is unknown. Two bung type drums with closed tops were found beneath southern end of stump pile. One was basically empty and the other contained green solids.

All the drums found in Area 2 had multiple bullet holes or punctures.


Crane Staging Area
Site Gate
Sludge Pond
AREA 2
Decon Area
Staging Area
Pillar Wall
Drum Storage Area
AREA 1-B
(No Drums Located)
Decon Area
Pond
AREA 1-A
Crane Staging Area
Residential Debris
N
feet
0
50
100
200
Explanation
Trench Rim
Road
Fence
Fill Area
Drum Area
Data Based Upon Brunton Compass/Tape Survey By EPB
August 23/24, 1991
BURLINGTON ENVIRONMENTAL INC.
PROJECT NUMBER 91S341
LANDSBURG MINE
DRUM REMOVAL PROJECT
Drawn by EB/JW
Date 9/10/91
Figure No. 1

Following initial assessment, the 11 drums around the pond were overpacked by hand into 85 gallon salvage drums. Contents of drums that had spilled onto the ground were shoveled back into their original containers. The overpacked drums were numbered and left on site until they could be removed.

On August 28th, a 30 ton crane was positioned above the stump pile to remove drums and stumps. The 11 overpacked "pond" drums were hoisted out of the trench, placed on a flatbed truck and taken to the drum storage facility.

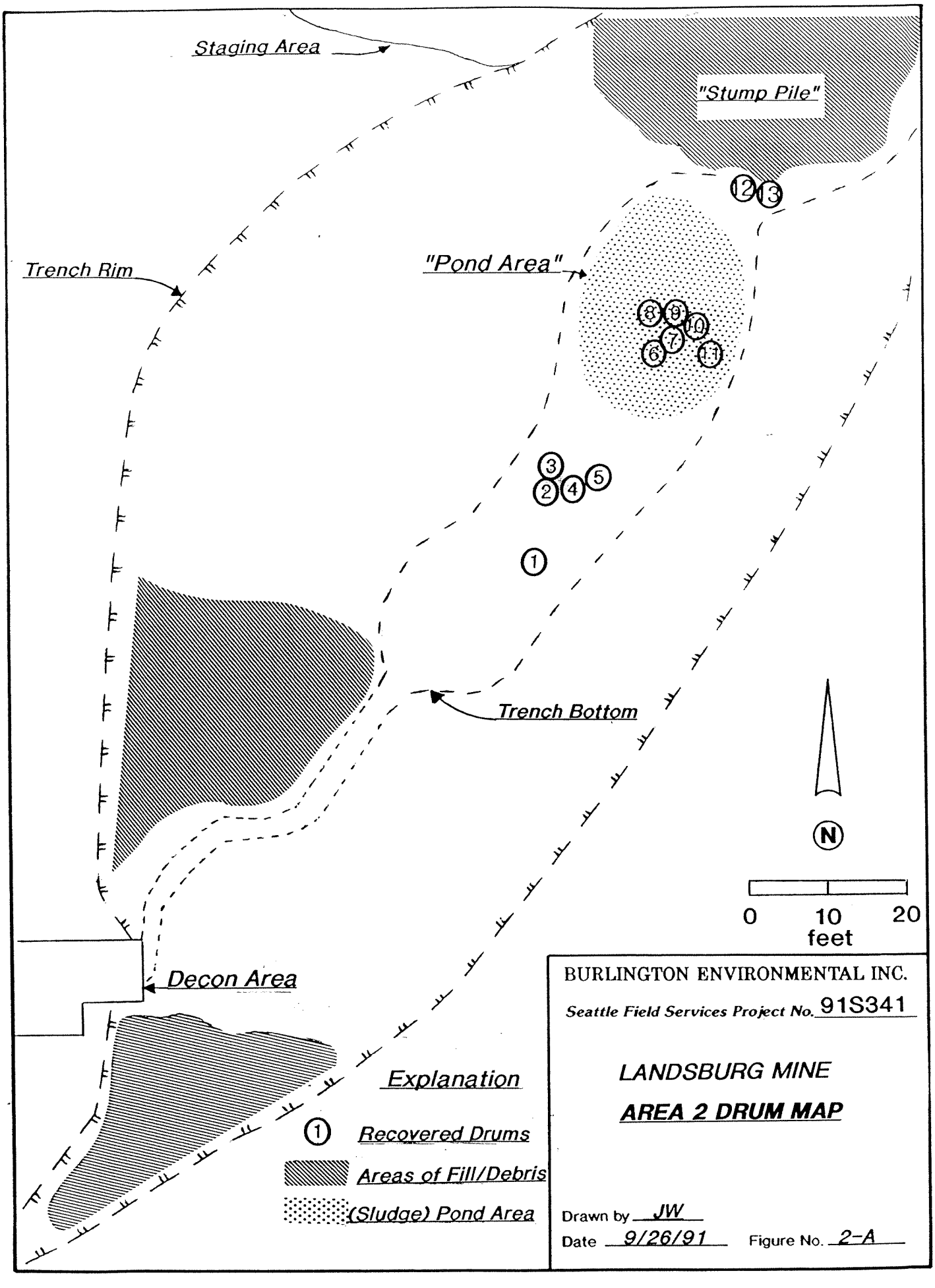
The crane then removed several stumps to expose the two drums beneath the stump pile. These drums were also overpacked, labled and removed to the storage facility. During stump removal, ten additional drums were observed mixed in with the stump pile debris. Recovery of these additional drums would require support by mechanical equipment outside the project scope of work. Consequently, they were left in place.

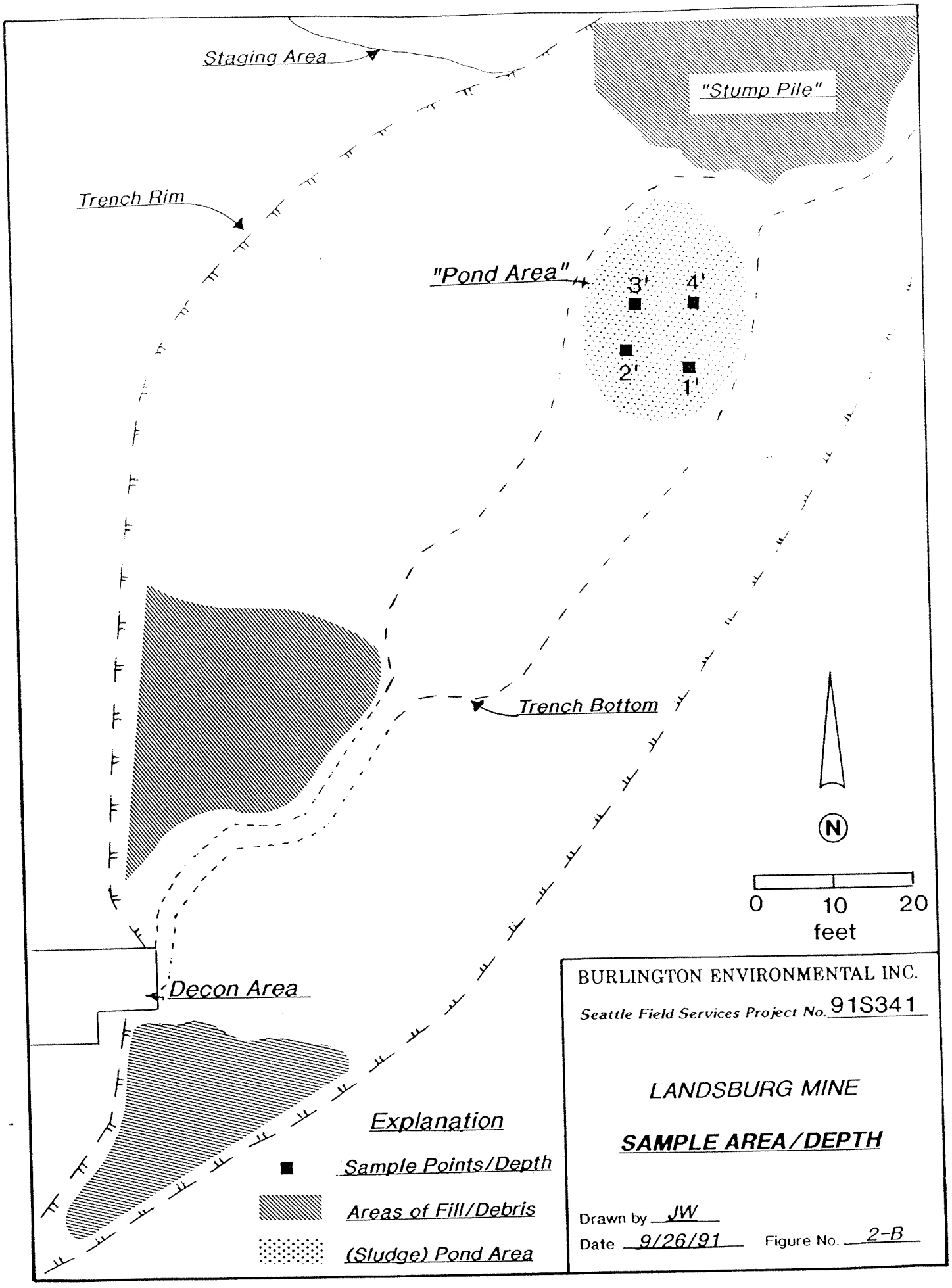
Area 1A

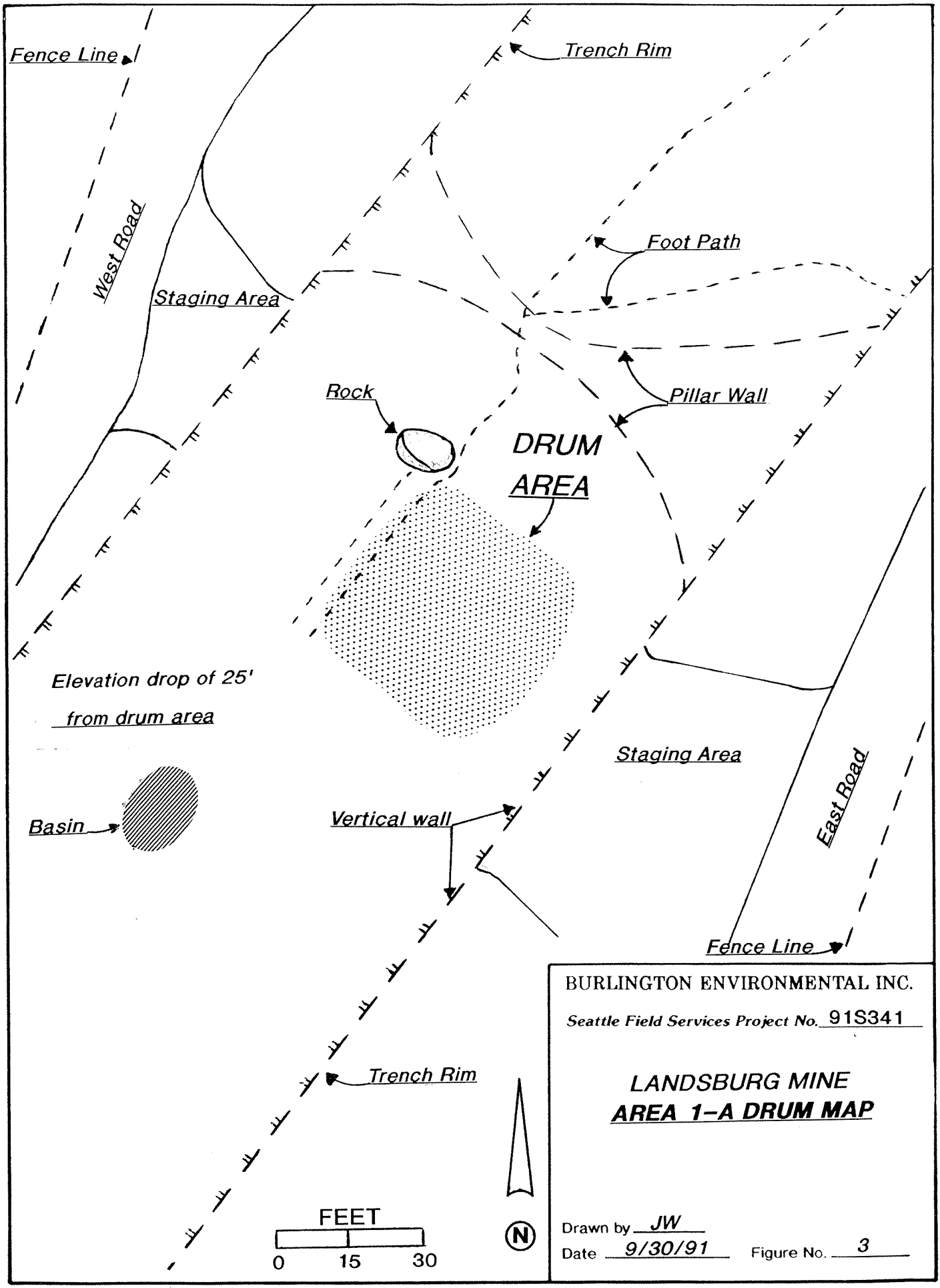
Most of the visible drums in the Landsburg Trench are located in Area 1A, approximately 500 feet southwest of Area 2 (see Figure 1). The top of the drum pile was about 25 to 30 feet below the east rim of the trench and extended down slope for 40 to 45 feet to the trench floor. The width of the pile along the trench wall was 40 feet (Figure 3). At the upper end of the pile, drums were piled or layered 2 to 3 high, and at the bottom, 4 to 5 high. All of the top layer of drums and part of the second had bullet holes or angular punctures made with a chisel or other sharp object. Inital assessment of the pile revealed that many of the drums were crushed or deformed, especially those near the bottom of the pile. About 10% of the drums contained liquids, the rest were sludgey solids.

The 30 ton crane was positioned above the pile on the east side of the trench for recovery operations. The crane operator was in radio communication with workers in the trench and an observer was stationed on the west side of the trench with a clear view of both the recovery workers and crane operator. Recovery operations began on August 29th.

The drum removal process was initiated by a visual assessment of each drum prior to overpacking. After assessment, each drum was lifted with the crane and placed into 85 gallon overpack drums. If copious liquids were present, they were transferred to new drums and removed. The overpacked drums were hoisted out of the trench and put on a flatbed truck then taken to the drum storage area. About 10% of the drums recovered from area 1A were placed in


Staging Area
"Stump Pile"
Trench Rim
"Pond Area"
Trench Bottom
Decon Area
N
0
10
20
feet
Explanation
Recovered Drums
Areas of Fill/Debris
(Sludge) Pond Area
BURLINGTON ENVIRONMENTAL INC.
Seattle Field Services Project No. 91S341
LANDSBURG MINE
AREA 2 DRUM MAP
Drawn by JW
Date 9/26/91
Figure No. 2-A


Staging Area
"Stump Pile"
Trench Rim
"Pond Area"
3'
4'
2'
1'
Trench Bottom
N
0
10
20
feet
Decon Area
Explanation
Sample Points/Depth
Areas of Fill/Debris
(Sludge) Pond Area
BURLINGTON ENVIRONMENTAL INC.
Seattle Field Services Project No. 91S341
LANDSBURG MINE
SAMPLE AREA/DEPTH
Drawn by JW
Date 9/26/91
Figure No. 2-B



BURLINGTON ENVIRONMENTAL INC.

Seattle Field Services Project No. 91S341

LANDSBURG MINE
AREA 1-A DRUM MAP

Drawn by *JW*

Date *9/30/91*

Figure No. *3*

1 cubic yard bulk bags and removed because they were too flat or crushed to fit into overpack salvage drums.

A total of 103 drums were removed from Area 1A. This included an additional 50 drums authorized for removal by the PRP Group under a change order in early September. Ten of these were basically empty but contained some residues or coatings. Drum removal operations were completed on September 12th.

Drum Sampling

Sampling of drum contents was done at the drum storage area. After removing the lid from the overpack, a 1 inch hole was made in the top of the drum with a brass non-sparking brass punch. A glass tube was inserted to collect liquid samples. If the drum contained solids or sludges, the hole was enlarged to collect samples with an aluminum sampling scoop. Samples were placed in 16 ounce jars with teflon seals in the lid. Sample labels were affixed and the jars placed in coolers for transport to the lab.

Information regarding physical characteristics of the drum contents and volume was recorded on the drum recovery log at the time of sampling. The drum recovery log also included a description of the drum condition, its location, and an identifying number. Copies of the drum recovery logs are included in the Appendix.

Sludge sampling in Area 2

The "pond" site in Area 2 was sampled on September 12th (see Figure 2-B). Four 16 ounce samples were collected at varying depths to provide adequate material for overall characterization. Sample #1 was taken 1 foot deep, #2 at 2 feet, #3 at 3 feet, and #4 at 4 feet. These four samples were then composited into one sample that was submitted to the laboratory for analysis.

Sludge material in the "pond" appears to be paint waste, petroleum products, and resins. There are different layers in the material which suggests multiple episodes of dumping of various products. Core samples were collected with a hand auger to visually inspect the various layers of sludge. They range from light to dark brown with occasional black streaks and greenish tints. The depth of material is about 4 feet and the total volume is estimated to be between 65 and 70 cubic yards.

Site Reconnaissance

The trench area southwest of Area 1A was examined for other drum piles. The SHA report had indicated drums were present in this area (Area 1B) but none could be located. A

number of areas of fill material were present and are shown on Figure 1. These fill areas could potentially contain drums beneath the present surface. A "burn barrel" was found mixed with residential debris in one such fill area at the southerly end of Area 1B.

Demobilization

Site demobilization and sampling activities were completed by September 18th. Decon facilities, the storage container and portable toilet were removed from the site. Overpacked drums in the drum storage area were covered with a tarp. The site was secured from unauthorized entry by locking the gate in the cylone fence.

Analytical

The drum samples were submitted to Burlington Environmental's corporate laboratory for Classification and Characterization (C & C) analysis. This is a relatively inexpensive analysis to determine the physical parameters of a waste and whether or not it contains certain regulated substances that affect disposal options. The analysis is primarily used to prepare profiles for disposal at Burlington Environmental's TSD facilities. Copies of the C & C analysis reports are in the Appendix.

Of the 13 drums recovered in Area 2, one was empty (#12) and the remainder contained mostly green, brown, black, or red solids, half of which were burnable. Six drums contained some free liquids (1 to 50%). Four samples tested positive for hexavalent chrome, three for phenolics, three for chlorinated compounds, and four contained oxidizers. All of the samples were negative for cyanides and sulfides.

A total of 103 containers were recovered from Area 1A including one 50 gallon hot water tank that was cleaned and scrapped. An additional 4 drums of liquids were generated by transfering product from old to new drums. Of these 107 drums, 7 were empty, 42 contained solidified material, 34 contained both solids and liquids, 12 contained semi-solids or sludges, and 12 contained liquids. Product colors varied between black, brown, tan, red, yellow, amber, green, gray, and white.

Twenty one samples from Area 1A tested positive for oxidizers and 16 were positive for phenolic materials. Twenty six samples contained chlorinated solvents and 39 hexavalent chromium. No cyanides or sulfides were detected. Eighty two samples were burnable with flash points from less than 70^{o} to over 200^{o} F.

Drum Removal

On October 28th and 30th, 131 drums were loaded from the drum storage area and shipped on flatbed trucks to Burlington Environmental's Georgetown TSD facility for disposal. Besides the 115 drums actually recovered from the trench, there were 9 drums of PPE and related material, 3 drums of decon water, and 4 drums of liquids transferred into new containers during recovery operations in Area 1A. The shipments were made under Hazardous Waste Manifests Numbers 17375, 25418, 25420, and 25421, copies of which are in the Appendix.

Site Closure

During removal of the drums from the site in late October, it was noticed that about 4 feet of soil had slid down the side of the trench in area 1A above the drums exposing partially buried drums and covering others. Consequently, after removal of the drums, the permalon liner from the drum storage area was removed and placed over the partially exposed damaged drums still remaining. The liner was tied to tree stumps and anchored with sandbags to provide a secure cover protecting the remaining drums from rain over the winter months.

Drum Disposal

Upon arrival at Georgetown, the drums were logged in, inspected, and the contents volumetrically measured. A Fingerprint Analysis for final disposal was generated for each drum based upon the C & C analysis and other lab data. This information is shown on Table 3.

The disposal option used for each drum was the least expensive allowable by law and regulation. The materials were all disposed of by incineration or otherwise burned as fuels at RCRA facilities. Disposal costs are based upon the volume of material and Georgetown's current pricing. The materials designated for disposal were:

Solid Blend Fuels >5000 BTU/lb. - Cadence Cons
Straight incineration <5000 BTU/lb.- Rollins Cons
Mixed Wastes, < 1% solvents - Main Still (liquids)
- Rollins Cons (solids)
Mixed Solvents >5000 BTU/lb - Alternative Fuels
Oils >5000 BTU/lb. - Alternative Fuels
Emulsification >5000 BTU/lb.- Alternative Fuels

Empty drums were crushed and landfilled at Arlington, Oregon along with other non-burnable debris.

Following the C & C analyses, all the drum samples were split into two groups, burnable and non-burnable. Composited samples were made from each group, 9 of burnable material and 3 of non-burnable (see Table 1). These samples were analysed for total cadmium, chromium, and lead. These analyses found lead concentrations ranging from 1,000 ppm to 11,000 ppm, chromium from 660 to 4900 ppm, and cadmium from 1.5 to 22 ppm. The lead and chromium levels were above regulatory limits for land disposal. The metals laboratory reports can be found in the Appendix.

From the above analyses, four disposal profiles were prepared:

Profile # CP 49422 - RQ Waste Paint Related Material Combustible Liquid NA 1263 (D006, D007, D008, F002, F003, F005)

Profile # CP 49437 - RQ Waste Paint Related Material Flammable Liquid NA 1263 (D001, D006, D007, D008, F002, F003, F005)

Profile # CP 51718 - RQ Hazardous Waste Liquid N.O.S. ORM-E NA 9189 (F002, F003, F005)

Profile # CP 51719 - RQ Hazardous Waste Liquid N.O.S. ORM-E NA 9189 (D006, D007, D008)

A list of the drums included in each profile is given in Table 2.

The composited sludge sample taken from the "pond" area in Area 2 was analyzed and found to contain a variety of F-listed solvents, namely methylene chloride (1690 ppm), trichlorofluoromethane (299 ppm), 1,1,2-trichloro-trifluoroethane (216 ppm), 1,1,1-trichloroethane (317 ppm), trichloroethene (1530 ppm), toluene (141 ppm), ethylbenzene (270 ppm), and total xylenes (1320 ppm). In addition, the sample contained 67,000 ppm TPH and 4.9 ppm PCBs (Aroclor 1254). TCLP metals (D004-11) were all negative except for lead which was 0.84 ppm. A copy of the pond area sludge sample results is in the Appendix.

The sludge in the "pond" in Area 2 exceeds Method A Soil Cleanup Levels under the Washington State Model Toxics Control Act (WAC 173-340) for ethylbenzene (20 ppm), methylene chloride (0.5 ppm), PCBs (1 ppm), toluene (40 ppm), 1,1,1-trichloroethane (20 ppm), and total xylenes (20 ppm).

Burnable

Composite # B 1

Samples 2-A, 3-A, 4-A, 6-A, 7-A, 9-A, 10-A, 12-A, 14-A, 15-A, and 13-2.

Composite # B 2

Samples 17-A, 18-A, 19-A, 21-A, 22-A, 23-A, 1-2, 6-2, 8-2, 10-2, and 11-2.

Composite # B 3

Samples 24-A, 25-A, 27-A, 28-A, 29-A, 30-A, 33-A, 34-A, 35-A, and 37-A.

Composite # B 4

Samples 38-A, 39-A, 40-A, 41-A, 42-A, 43-A, 44-A, 45-A, 45-A, 47-A, and 50-A.

Composite # B 5

Samples 51-A, 56-A, 57-A, 58-A, 59-A, 60-A, 62-A, 64-A, 65-A, and 66-A.

Composite # B 6

Samples 67-A, 68-A, 69-A, 70-A, 71-A, 72-A, 73-A, 74-A, 75-A, and 76-A.

Composite # B 7

Samples 77-A, 78-A, 79-A, 80-A, 81-A, 82-A, 83-A, 84-A, 85-A, and 86-A.

Composite # B 8

Samples 87-A, 88-A, 90-A, 91-A, 92-A, 93-A, 94-A, and 95-A.

Composite # B 9

Samples 96-A, 97-A, 99-A, 102-A, 103-A, 55/56-B, 55/57/58-B and 69/72-B.

Note: Sample numbers with a hyphen and the number 2 (-2) are from Area 2. Those with a hyphen and the letter A (-A) are from Area 1A. Samples with slash marks (/) are liquids from old drums that were transferred into new drums.

Non-Burnable

Composite #N.B. 1

Samples 1-A, 8-A, 11-A, 13-A, 20-A, 2-2, 3-2, 4-2, 5-2, 7-2, and 9-2.

Composite #N.B. 2

Samples 26-A, 36-A, 48-A, 49-A, 53-A, 54-A, 61-A, & 89-A.

Composite #N.B. 3

Samples 91/95/96-B, 98-A, 100-A, 101-A, & XXX (Decon Water)

BURLINGTON ENVIRONMENTAL INC.

Seattle Field Services Project No. 91S341

Landsburg Mine Drum Removal Project

TABLE 1

Drum Samples Composited for Metals Analysis

Date 12/10/91

Profile CP 49422

Area 1A Drums

2-A
3-A
6-A
7-A
15-A
17-A
18-A
19-A
21-A
23-A
25-A
27-A
29-A
30-A
33-A
34-A
35-A
36-A
37-A
38-A
39-A
40-A
41-A
43-A
44-A
45-A
47-A
51-A
56-A
55/56-B
55/57/58-B
57-A
58-A
60-A
62-2
65-A
66-A
68-A
70-A
71-A
74-A
75-A
76-A
77-A
82-A
83-A
84-A
85-A
86-A
90-A
91-A
93-A
94-A
95-A
96-A
97-A
100-A
102-A

Area 2 Drums

1-2
4-2
6-2
8-2
9-2
11-2

Total 64 Drums

Profile CP 49437

Area 1A Drums

9-A
10-A
12-A
14-A
22-A
24-A
24-A
28-A
42-A
50-A
59-A
64-A
67-A
69-A
69/72-B
72-A
73-A
78-A
79-A
80-A
81-A
87-A
88-A
92-A
99-A
101-A
103-A

Area 2 Drum

13-2

PPE 9 Drums

Total 36 Drums

Profile CP 51719

Area 1A Drums

1-A
5-A
8-A
11-A
13-A
20-A
26-A
31-A
32-A
46-A
48-A
49-A
52-A
53-A
54-A
55-A
61-A
63-A
89-A
91/95/96-B
98-A

Area 2 Drums

2-2
3-2
5-2
7-2

Total 25 Drums

Profile CP 51718

Area 1A Drum

4-A

Area 2 Drums

10-2
12-2

Decon Water 3 Drums

Total 6 Drums

BURLINGTON ENVIRONMENTAL INC.

Seattle Field Services Project No. 91S341

Landsburg Mine Drum Removal Project

TABLE 2

Disposal Profile Drum List

Date 12/10/91

GEORGETOWN LABORATORY REPORT

DATE: OCTOBER, 31,1991
SUBJECT: FINGERPRINT ANALYSIS FOR FINAL DISPOSAL METHOD - LANDSBURG MINE
ANALYST: LOUIS LA ROSA, HECTOR SANCHEZ
MANIFEST # : 25421
WASTE RECEIPT # : 10492

PLANT#	DRUM #	HEAT OF COMBUSTION	FINAL DISPOSAL	COMPOSITION	VOLUME (GAL)
10492-01	1A-102	>5000 BTU/lb	MIXED SOLVENTS	10% SOLIDS	55
10492-02	1A-60	>5000 BTU/lb	MIXED SOLVENTS	50% SOLIDS	40
10492-03	1A-41	<1% SOLVENTS	MAIN STILL/ROLLINS CONS	30% SOLIDS	55
10492-04	1A-2	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	15
10492-05	1A-37	>5000 BTU/lb	CADENCE CONS	50% SOLIDS	2
10492-06	1A-43	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	5
10492-07	1A-19	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	30
10492-08	1A-4	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	10
10492-09	1A-44	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	5
10492-10	1A-38	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	45
10492-11	1A-35	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	20
10492-12	1A-40	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	10
10492-13	1A-45	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	20
10492-14	1A-6	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	5
10492-15	1A-21	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	20
10492-16	2A-10	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	30
10492-17	1A-36	<1% SOLVENTS	MAIN STILL/ROLLINS CONS	50% SOLIDS	20
10492-18	1A-29	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	15
10492-19	1A-51	>5000 BTU/lb	CADENCE CONS	90% SOLIDS	55
10492-20	2A-9	<5000 BTU/lb	ROLLINS CONS	95% SOLIDS	40
10492-21	A2-8	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	35
10492-22	1A-57	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	40
10492-23	1A-84	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	25
10492-24	1A-100	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	40
10492-25	1A-56	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	10
10492-26	2A-11	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	25
10492-27	1A-93	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	20
10492-28	1A-91	<5000 BTU/lb	ROLLINS CONS	90% SOLIDS	10
10492-29	1A-90	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	20
10492-30	1A-58	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	35
10492-31	1A-86	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	55
10492-32	1A-83	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	20
10492-33	1A-96	<5000 BTU/lb	ROLLINS CONS	95% SOLIDS	25
10492-34	1A-85	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	25
10492-35	1A-15	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	25
10492-36	1A-30	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	55
10492-37	2A-4	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	20
10492-38	1A-18	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	50
10492-39	1A-97	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	45
10492-40	2A-6	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	30
10492-41	1A-94	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	45
10492-42	1A-47	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	50
10492-43	2A-1	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	30
10492-44	1A-17	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	45
10492-45	1A-25	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	30
10492-46	1A-34	<5000 BTU/lb	ROLLINS CONS	95% SOLIDS	50
10492-47	1A-39	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	55
10492-48	1A-33	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	30
10492-49	1A-27	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	30
10492-50	1A-23	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	15
10492-51	1A-3	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	5

NOTE: ALL THE ABOVE MATERIAL MEETS THE APPROPIATE PROFILE , WITH THE FOLLOWING EXCEPTIONS: DRUMS# 10492-01,02,03,17

GEORGETOWN LABORATORY REPORT

DATE: NOVEMBER 7,1991
SUBJECT: FINGERPRINT ANALYSIS FOR FINAL DISPOSAL METHOD
MANIFEST#: 25418
WASTE RECEIPT#: 10493

PLANT#	DRUM #	HEAT OF COMBUSTION	FINAL DISPOSAL	COMPOSITION	VOLUME (GAL)
10493-01	1A-77	>5000 BTU/lb	CADENCE CONS	90% SOLIDS	30
10493-02	1A-75	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	55
10493-03	1A-66	<5000 BTU/lb	ROLLINS CONS	95% SOLIDS	55
10493-04	1A-68	>5000 BTU/lb	CADENCE CONS	80% SOLIDS	30
10493-05	1A-65	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	35
10493-06	1A-74	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	55
10493-07	1A-95	<5000 BTU/lb	ROLLINS CONS	95% SOLIDS	25
10493-08	1A-76	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	35
10493-09	1A-70	<1% SOLVENTS	MAIN STILL	100% LIQUID	55

NOTE: ALL THE ABOVE NOTED MATERIAL MEETS THE APPROPIATE PROFILES, WITH THE FOLLOWING EXCEPTIONS:

DRUM# 10493-09 CONTAINS 55 GALLONS OF LIQUID WITH <1% SOLVENTS.

BURLINGTON ENVIRONMENTAL INC.

Seattle Field Services Project No. 91S341

Landsburg Mine Drum Removal Project

TABLE 3

Georgetown Fingerprint Analyses

Waste Receipts 10492 and 10493

Date 12/10/91

GEORGETOWN LABORATORY REPORT

DATE: NOVEMBER 7, 1991
SUBJECT: FINGERPRINT ANALYSIS FOR FINAL DISPOSAL METHOD
MANIFEST#: 25420
WASTE RECEIPT#: 10516

PLANT#	DRUM #	HEAT OF COMBUSTION	FINAL DISPOSAL	COMPOSITION	VOLUME (GAL)
10516-01	1A-61	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	55
10516-02	1A-13	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	55
10516-03	1A-48	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	40
10516-04	1A-49	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	55
10516-05	1A-84	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	30
10516-06	1A-20	<5000 BTU/lb	ROLLINS CONS	85% SOLIDS	35
10516-07	1A-53	<5000 BTU/lb	ROLLINS CONS	90% SOLIDS	55
10516-08	1A-54	<5000 BTU/lb	ROLLINS CONS	80% SOLIDS	45
10516-09	2A-2	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	2
10516-10	1A-98	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	50
10516-11	1A-89	>5000 BTU/lb	MIXED SOLVENTS	100% LIQUID	10
10516-12	2A-2	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	25
10516-13	2A-7	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	55
10516-14	1A-26	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	30
10516-15	2A-3	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	30
10516-16	1A-1	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	25
10516-17	1A-11	<1% SOLVENTS	MAIN STILL	100% LIQUID	20
10516-18	XXX	<1% SOLVENTS	MAIN STILL	100% LIQUID	30
10516-19	XXX	<1% SOLVENTS	MAIN STILL	100% LIQUID	40
10516-20	XXX	<1% SOLVENTS	MAIN STILL	100% LIQUID	5
10516-21	1B-91,95,96	<1% SOLVENTS	MAIN STILL	100% LIQUID	50
10516-22	1B-55,57,58	>5000 BTU/lb	OILS	100% LIQUID	50
10516-23	1B-55,56	>5000 BTU/lb	OILS	25% SOLIDS	50
10516-24	1A-7	>5000 BTU/lb	CADENCE CONS	95% SOLIDS	10
10516-26	1A-71	>5000 BTU/lb	MIXED SOLVENTS	50% SOLIDS	20
10516-27	1A-64	>5000 BTU/lb	CADENCE CONS	95% SOLIDS	25
10516-28	1A-10	>5000 BTU/lb	CADENCE CONS	95% SOLIDS	50
10516-29	1A-28	>5000 BTU/lb	CADENCE CONS	90% SOLIDS	40
10516-30	1A-12	>5000 BTU/lb	CADENCE CONS	90% SOLIDS	50
10516-31	1A-42	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	45
10516-32	1A-81	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	50
10516-33	1A-50	>5000 BTU/lb	CADENCE CONS	75% SOLIDS	55
10516-34	2A-13	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	55
10516-35	1A-69	>5000 BTU/lb	MIXED SOLVENTS	50% SOLIDS	10
10516-36	1A-67	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	20
10516-37	1A-101	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	30
10516-38	1A-73	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	55
10516-39	1A-99	>5000 BTU/lb	CADENCE CONS	80% SOLIDS	55
10516-40	1A-78	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	30
10516-41	1A-103	>5000 BTU/lb	CADENCE CONS	99 % SOLIDS	55
10516-42	1A-14	>5000 BTU/lb	MIXED SOLVENTS	50% SOLIDS	50
10516-43	1A-80	>5000 BTU/lb	MIXED SOLVENTS	20% SOLIDS	40
10516-44	1A-79	>5000 BTU/lb	MIXED SOLVENTS	100% LIQUID	55
10516-45	1A-24	>5000 BTU/lb	MIXED SOLVENTS	50% SOLIDS	55
10516-46	1A-87	>5000 BTU/lb	MIXED SOLVENTS	50% SOLIDS	50
10516-47	1A-88	>5000 BTU/lb	MIXED SOLVENTS	50% SOLIDS	40
10516-48	1A-22	>5000 BTU/lb	EMULSIFICATION	90% SOLIDS	40
10516-49	1A-9	>5000 BTU/lb	EMULSIFICATION	50% SOLIDS	25
10516-50	1A-59	>5000 BTU/lb	CADENCE CONS	99% SOLIDS	40
10516-51	2A-69,72	>5000 BTU/lb	OILS	100% LIQUID	30
10516-52	1A-92	<5000 BTU/lb	ROLLINS INCINERATION	100% SOLIDS	50

GEORGETOWN LABORATORY REPORT

DATE: NOVEMBER 7, 1991
SUBJECT: FINGERPRINT ANALYSIS FOR FINAL DISPOSAL METHOD
MANIFEST#: 17375
WASTE RECEIPT#: 10515

PLANT#	DRUM #	HEAT OF COMBUSTION	FINAL DISPOSAL	COMPOSITION	VOLUME (GAL)
10515-10	1A-71	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	30
10515-11	1A-62	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	5
10515-12	1A-82	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	20
10515-13	1A-98	<5000 BTU/lb	ROLLINS CONS	99% SOLIDS	10
10515-14	1A-5	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	1
10515-15	1A-46	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	20
10515-16	1A-63	>5000 BTU/lb	CADENCE CONS	100% SOLIDS	5
10515-18	1A-52	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	5
10515-19	2A-12	<5000 BTU/lb	ROLLINS CONS	100% SOLIDS	1

NOTE: DRUMS# 10515-01 THRU 10515-09 CONTAIN PPE
DRUM# 10515-17 IS AN EMPTY CONTAINER

BURLINGTON ENVIRONMENTAL INC.

Seattle Field Services Project No. 91S341

Landsburg Mine Drum Removal Project

TABLE 3 (continued)

Georgetown Fingerprint Analyses

Waste Receipts 10515 and 10516

Date 12/10/91