AMOCO, PORT EVERGLADES, FL.
PHASE VI REPORT

CLIFF BERRY SITE

CWR\AMOCOPH61
12/15/87

AMOCO - PORT EVERGLADES
PHASE VI FIELD INVESTIGATION

INTRODUCTION

This report conveys the results of the sixth phase of work performed by Environmental Science and Engineering (ESE) at Amoco's Port Everglades site. Phases I through V have been completed previously and transmitted to Amoco (ESE, August, 1987 and ESE, October, 1987).

Phase VI consists of a two task investigation which was initiated because the Broward County Environmental Quality Control Board (BCEQCB) was concerned about soil and possible groundwater contamination at two locations within the Amoco site. Phase VI focused on:

- Investigating the possible presence of PCBs in the material filling a drainfield as reported by Enviropact (1987).
- Investigating possible contamination of the water table aquifer by waste oil which reportedly leaked from an underground waste oil storage tank.

TASK 1 -- Drainfield Investigation

The drainfield was designed to dispose of water discharged from an oil water separator at Mr. Berrys' waste oil reclamation unit.

Phase VI was initiated because of a BCEQCB inquiry into the possible presence of PCBs in the drainfield material. Enviropact Inc. had previously reported the presence of very low levels of PCBs in trenches which were reportedly dug through drainfield material (see Table 8.2 in: Enviropact, 1987). ESE analyzed three samples from the drainfield as part of Phase V and also detected low PCB concentrations in several samples (ESE, October, 1987).

Although PCB concentrations reported by Enviropact are not disputed the

relative position of the Enviropact datapoints is suspect because the drainfield trenches plotted on the Enviropact map (Enviropact, 1987) are farther to the south than the documented location of the drainfield (ESE, October, 1987 and this report).

As a result of an onsite meeting between ESE, Amoco, and BCEQCB personnel it was decided to:

- Sample the drainfield by digging two trenches (trenches #1 and #2) in the area where ESE observed drainfield material during soil sampling during Phase III and Phase V.

- Dig an additional trench (trench #3) to the east of MW 7 where Enviropact had obtained PCB contaminated drainfield samples (according to the map displayed as Figure 1.4 in: Enviropact, 1987). Note that trench #3 is located significantly south of the southernmost extent of the drainfield as defined during Phases I and V (ESE , August and October, 1987).

- Dig the trenches using a backhoe.

Furthermore, it was agreed that soil samples would be collected from each of the three trenches at the following depths:

- In soil or drainfield material above the water table.

- At the water table.

- At the base of the drainfield with the sample intentionally including some of the natural material (clay or limestone) below the drainfield.

It was found, in practice, that a trench dug into loose drainfield cobbles would not stay open but that the trench walls collapsed into the

hole. As a result, the maximum sampling depth was approximately 2.5 ft below the static water level (SWL) or about 5.5 ft below ground level (BGL). Samples were collected from the trench walls whenever possible. Representative samples were collected including cobbles and sand. The backhoe bucket was decontaminated between trenches.

Trenches #1 and #2 penetrated drainfield fill consisting of limestone cobbles typically measuring one to two inches on a side. Trench #3 did not penetrate the old drainfield and cut the top of the clay layer at 2.7 ft BGL.

Ten soil samples were collected from the three trenches (see table 1). Eight samples were analyzed for the presence of seven PCB compounds (see Appendix A). Very low levels of PCB 1254 were detected in all of the samples except DT #4. Concentrations ranged from 22 ug/kg to 900 ug/kg. (see Appendix A). No other PCB species were detected. Data from monitor well #7, located approximately 16 ft west of trench #3, document PCB concentrations below the detection limit of 1 ug/l (Enviropact, 1987). This confirms that PCB contamination of ground water has not occurred.

It was noted during the digging of trenches #1 and #2 that water standing in the trench was relatively clear with no hydrocarbon odor, no milky color, and that it did not display free hydrocarbons or an oily sheen. Some of the drainfield cobbles were stained black as noted in the Phase V soil sampling effort. This was a surface stain and not an oily coating. Water flowing into trench #3 appeared clean and clear with no discernable hydrocarbon odors.

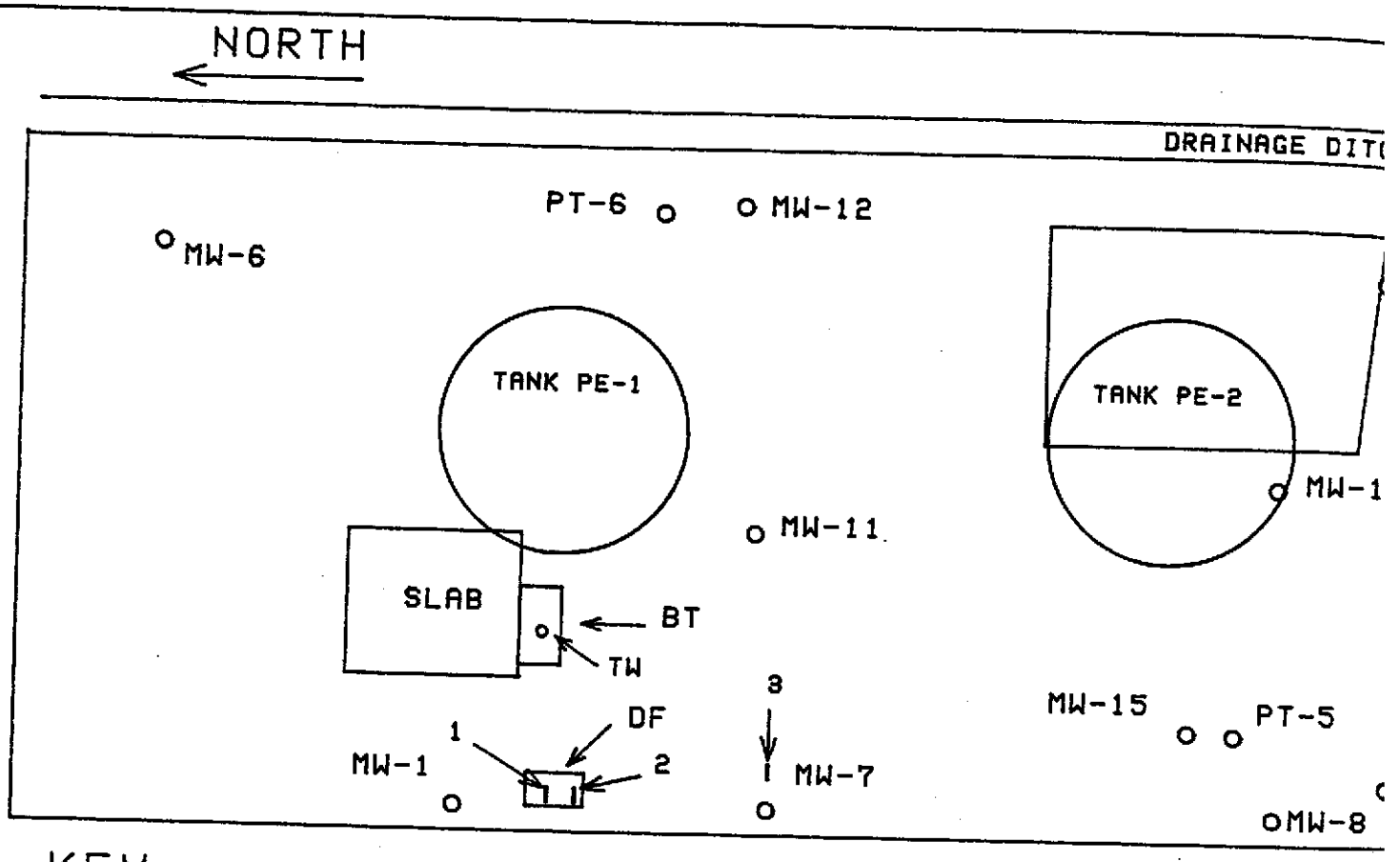
TASK 2 -- Underground Waste Oil Tank Site Investigation

During the time that Cliff Berry operated a waste oil reclamation project, he stored waste oil in an underground storage tank adjacent to the south end of a concrete pad (see Figure 1 for location). Sometime after the oil reclamation operation had ceased, the tank was removed and free oil was observed in the excavation. The resulting hole was

Table 1: DRAINFIED SAMPLE LOCATIONS

TRENCH NUMBER	SAMPLE NUMBER	SAMPLE DEPTH (FT BGL)	LITHOLOGY	COMMENTS
1	DT- 1	0.9	LS COBBLES AND SAND	ABOVE SWL
1	DT- 2	3.2	LS COBBLES	AT SWL, BROKEN DURING SHIPMENT TO LAB.
1	DT- 3	4.8	LS COBBLES AND SAND	BELOW SWL
2	DT- 7	1.1	LS COBBLES AND SAND	ABOVE SWL
2	DT- 8	3.0	LS COBBLES	AT SWL, BROKEN DURING SHIPMENT TO LAB
2	DT- 9	3.0	LS COBBLES	AT SWL
2	DT-10	3.2 - 5.7	LS COBBLES	BELOW SWL
3	DT- 4	1.4	SAND, FEW LS FRAGS.	ABOVE SWL
3	DT- 5	2.3	SILTY SAND, FEW LS. FRAGS	ABOVE SWL
3	DT- 6	2.7	CLAY AND PEAT	CLAY AND PEAT AT PERCHED WATER TABLE

BGL - BELOW GROUND LEVEL
LS - LIMESTONE
SWL - STATIC WATER LEVEL



KEY

DF- DRAIN FIELD

BT- BURIED TANKS

MW- MONITOR WELLS

DRAINFIELD TRENCH

PT- PERCOLATION TEST

- SURFACE WATER SAMPLE

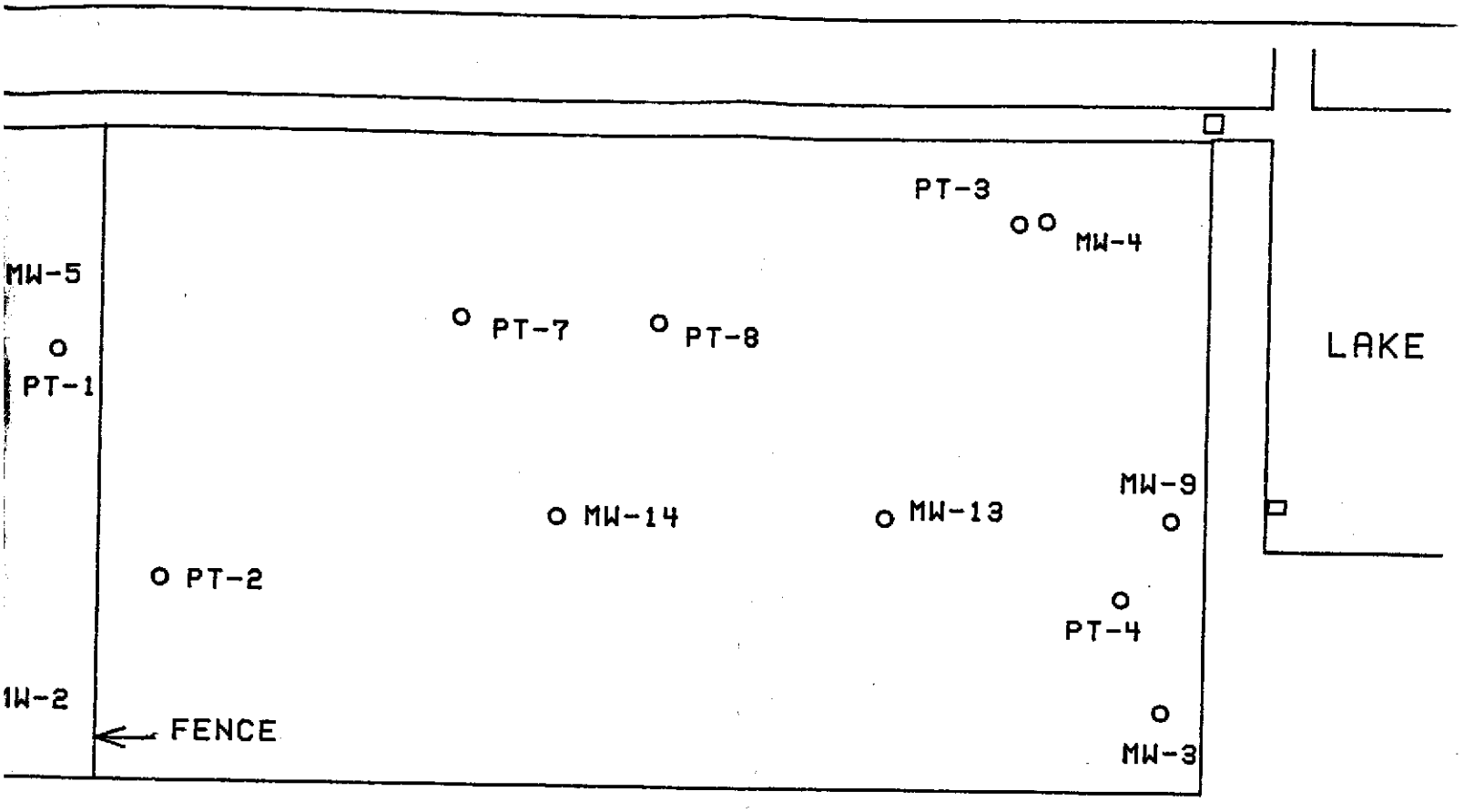
TW- TEMPORARY WELL

FIGURE 1

TRENCH AND TEMPORARY WELL LOCATIONS

Source: ESE, 1987

AMOCO



0 50 100 150

FEET

OCATIONS

AMOCO CORPORATION
PROPOSED FACILITY
PORT EVERGLADES, FLORIDA

backfilled with soil from the immediate area. The results of soil analyses (ESE, August, 1987, Phase II borings) on sample SB4-G showed that the backfilled material contains elevated levels of polynuclear aromatic hydrocarbons (PAHs). The total PAH concentration of sample SB4-G (197,200 ug/kg-dry) is 17 times higher than the next highest detected concentration. The purpose of Task 2 is to investigate whether the contamination noted in the backfilled material extends to the water table aquifer.

The Phase VI investigation at the underground storage tank site consisted of installation and removal of a temporary groundwater sampling well, well development, and groundwater sampling and analysis. On November 23, 1987 ESE field personnel supervised the installation and development of a 12.0 feet deep temporary sampling well. A copy of the field notes are included in Appendix B. The upper 10 feet of the boring penetrated slightly clayey, black silty-sand. Limestone was encountered from depths of 10.0 to 12.0 feet. The hole was bored using a 6 inch I.D. hollow stem auger. The well was constructed of 10 feet of two inch diameter factory slotted screen plus two feet of riser pipe. The filter pack consisted of coarse quartz sand, which extended from the base of the casing to approximately 1 foot above the top of the well screen. The water level in the well was 4.12 feet below the top of casing, approximately 3.8 feet below ground surface. Approximately 55 gallons of water (five saturated well volumes) were removed from the well during 35 minutes of pumping with a centrifugal pump. The well was allowed to recharge for 15 minutes before sampling. Samples were removed from the well using a decontaminated PVC bailer. Samples were preserved, chilled to 4° C, and shipped by overnight service to ESEs' Gainesville laboratory..

Results of analyses indicate the presence of numerous PAH compounds as well as benzene, xylene, toluene, and ethylbenzene (BXTE) (see Appendix A). Benzene was present at a concentration of 407 ug/l which was the highest measured value for any single compound. Total BXTE was present at a concentration of 844 ug/l. These analytical results are consistent

with contamination of water in the backfilled excavation by fuel or waste oil. This contamination is not surprising in light of the fact that soil samples collected from the backfilled excavation during Phase III and V were described as oily and smelling strongly of hydrocarbons.

It should be noted that significant contamination of water by hydrocarbon compounds appears to be restricted to the area of the excavation. Water sampling performed during Phase IV indicated that MW 1, MW 4, MW 6, and MW 9 are all free of significant hydrocarbon contamination (ESE, October, 1987). Enviropact reported up to 74.8 ug/l xylene with no detectable toluene in samples collected from MW 1 and 20.4 ug/l toluene with no detectable xylene in samples collected from MW 6 during September 1986 (Enviropact, 1986). Collectively these analyses indicate that groundwater in the area is free of significant hydrocarbon contamination.

REFERENCES:

Enviropact, 1986 Contamination Assessment Report for Groundwater at Cliff Berry, Inc. Port Everglades, Fl.

Enviropact, 1987 Remedial Action Plan: Phase I: Definition of Extent of Vertical Soil and Water Contamination, Cliff Berry, Inc., Port Everglades Florida

ESE, August, 1987 Phase I, II, and III Soil Report, Amoco Oil Company, Port Everglades, Florida

ESE, October, 1987 Phase IV and V Soil and Water Report, Amoco Oil Company, Port Everglades, Florida

APPENDIX A

PROJECT NUMBER 87404V0216
FIELD GROUP AMOCS5

PROJECT NAME AMOCO PT.EVERGLADE
LAB COORDINATOR J.D. SHAMIS

RESULTS OF ANALYSIS

STORET CODE:					70320	39514	39491	39495	39499	39503	39507	39511
METHOD CODE:					I	EC	EC	EC	EC	EC	EC	EC
PARAMETER:					MOIST.	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
UNITS:					%WET WT	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY
FLD.GRP.	#	SAMPLE ID	DATE	TIME								
AMOCS5	1	DT#1	10/29/87	11:05	19.1	<25.1	<25	<25	<25	<25	390	<25
AMOCS5	3	DT#3	10/29/87	11:15	28.3	<56.4	<56	<56	<56	<56	73	<56
AMOCS5	4	DT#4	10/29/87	13:00	14.3	<23.9	<24	<24	<24	<24	<24	<24
AMOCS5	5	DT#5	10/29/87	13:10	12.7	<23.6	<24	<24	<24	<24	27	<24
AMOCS5	6	DT#6	10/29/87	13:15	38.0	<33.2	<33	<33	<33	<33	500	<33
AMOCS5	7	DT#7	10/29/87	14:00	13.5	<238	<240	<240	<240	<240	900	<240
AMOCS5	9	DT#9	10/29/87	14:06	5.4	<7.18	<7	<7	<7	<7	53	<7
AMOCS5	10	DT#10	10/29/87	14:30	4.8	<16.3	<16	<16	<16	<16	22	<16

PROJECT NUMBER 87404V0218 PROJECT NAME AMOCO - PT. EV.
FIELD GROUP AMOCW2 LAB COORDINATOR J.D. SHAMIS

PARAMETERS	UNITS	STORET # / METHOD	SAMPLE AMOCW2 1
DATE			11/23/87
TIME			13:10
BENZENE	UG/L	34030 PI	407
CHLOROBENZENE	UG/L	34301 PI	<10.0
DICHLOROBENZENE,TOT.	UG/L	81524 PI	<10.0
ETHYLBENZENE	UG/L	34371 PI	342
TOLUENE	UG/L	34010 PI	15.8
XYLENES,TOTAL	UG/L	81551 PI	78.6
ACENAPHTHENE	UG/L	34205 LC	90.6
ACENAPHTHYLENE	UG/L	34200 LC	167
ANTHRACENE	UG/L	34220 LC	42.8
BENZO(A)ANTHRACENE	UG/L	34526 LC	25.7
BENZO(A)PYRENE	UG/L	34247 LC	<5.78
BENZO(B)FLUORANTHENE	UG/L	34230 LC	<3.36
BENZO(GHI)PERYLENE	UG/L	34521 LC	<11.9
BENZO(K)FLUORANTHENE	UG/L	34242 LC	<3.60
CHRYSENE	UG/L	34320 LC	7.95
DIBEN'(A,H)ANTH'CENE	UG/L	34556 LC	<14.3
FLUORANTHENE	UG/L	34376 LC	200
FLUORENE	UG/L	34381 LC	24.9
INDENO(1,2,3-CD)PYRN	UG/L	34403 LC	<4.40
NAPHTHALENE	UG/L	34696 LC	233
PHENANTHRENE	UG/L	34461 LC	914
PYRENE	UG/L	34469 LC	132

APPENDIX B

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.
P.O. Box ESE
GAINESVILLE, FL 32602-3053
(904) 332-3318 TWX 810-825-6310

JOB
SHEET NO. OF
CALCULATED BY DATE
CHECKED BY DATE
SCALE

10/29/87

0800 - arrived at Amoco Terminal to get keys to the site

0820 - arrived at site. Laid out steel tape between monitor wells #1 and #7.
- checked perc test holes drilled with hollow stem auger (Phase II) and found that they were grouted to surface as requested (I was able to find only the southernmost of the two holes. Area around northern hole heavily overgrown with high weeds).
- met with Harvey Schneider and Darcy ? of BCEQCB. Harvey suggested we submit a work plan for approval by FDER before proceeding. We told him we want to obtain samples today. agreed to make 2 cuts through drainfield and take 3 samples in each trench
  #1 above SWL
  #2 at SWL
  #3 at bottom of fill (cobbles) including some underlying clay.
- Harvey also suggested ~~digging~~ a third trench at the location of Envirogen's trench DF-. This is due east of MW-7.

Trench #1 44' South of MW #1
#2 55' " "
#3 16' East of MW #7

SWL in MW #1 ≈ 3.6' BTC
Stickup = 1.5'
∴ SWL = 2.1' BGL

3.6
1.5
2.1

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JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

10/29/87

1040 ~~0940~~ - waiting on back-hoe. Washed decon equipment (scrub brush and bucket) with low sudsing tripple phosphate soap and DI water.

1050 ~~0950~~ - Back hoe arrived
- Decomned backhoe bucket w/ TSP soap/DI Solution. Rinsed w/ DI

1100 - initiated digging trench #1

1115 - Started backfilling trench #1
samples on ice.

1130 - decomned backhoe bucket.
broke for lunch

1250 - initiated digging trench #3

-1316 - Commenced backfilling trench #3
Sampled on ice

1320 - decomned backhoe bucket

1355 - Commenced digging trench no 2

1435 - Commenced filling trench #2
Samples on ice

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JOB
SHEET NO. OF
CALCULATED BY DATE
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SCALE

Drainfield Trench (DT) Samples

Sample #1 0.9' BGL in Trench #1
Sample = cobbles of white LS. and sand.

Sample #2 3.2' BGL " = SWL
Sample = cobbles of white LS.

Sample #3 Trench 4.5' deep. Terminated digging because trench walls caving.
Sample = cobbles white & black LS., some silty

Sample #4 Trench #3 @ 1.4'
Sample = med gray sand. Few LS-concrete frags.

Sample #5 Trench #3 @ 2.3'
Sample = silty sd w/ LS cobbles

Sample #6 Clay & peat @ 3.7' from trench #3

Samples #4, 5, and 6 collected from trench wall.

Sample #7 Trench #2 @ 1.1'
Sample = white LS cobbles w/ Rust colored coating and sand

Sample #8 Trench #2 @ 3.0'. Sample steadied SWL
Sample = LS cobbles. Faint rusty colored coating.

Sample #9 Trench #2 @ 3.0' Lithology same as Sample #8

Sample #10 Trench #2 @ 3.7' – 5.7'
Sample = white & black LS cobbles
(black stained as noted in page V).

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JOB
SHEET NO. OF
CALCULATED BY DATE
CHECKED BY DATE
SCALE

Trench #1 - 44' south of MW #1
- 4.5' deep
- * note that sample #3 actually came from below bottom of trench because of caving. Sample removed from buck
- trench ≈ 13' long.
- water in trench appears to be muddy but uncontaminated by petroleum products. No oily sheen or floating product.

Sand to 1.8'
Trench #3 Hit wooden 4x 6s @ +8' 1.8' @ W end trench
" peat overlying marl (clay) @

sand to 1.8'
silty sand to 2.3'
1" to 6' peat below 2.3'
clay below peat
total trench depth = 4.1' - in clay

trenching terminated because intercepted natural material (peat + clay)

* clear water flowing into trench from peat / clay interface

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JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

Trench #2 0 - 0.5' med gray sand
LS cobbles below. Cobbles = white fossiliferous LS. Rust colored coating on many cobbles @ 0.5'-1.1'

SWL @ 3.0' in white LS cobble
faint rusty color @ 3.0' (coating on cobbles). Rusty color gradually diminishes w/ depth.
Took samples 8 & 9 @ 3.0' (~~just~~ straddled interval SWL)

Water is clean and clear. not muddied much by digging.

Bottom of trench #2 = 3.7' when took sample # 8+9.
Dug as deep as possible w/ bucket (± 2' deeper than hole bottom = 5.7')
Sample #10 originated in interval 3.7'-5.7'.
This procedure was necessary because of hole caving.

Hole depth after recovering sample # 10 = 3.8'

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JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

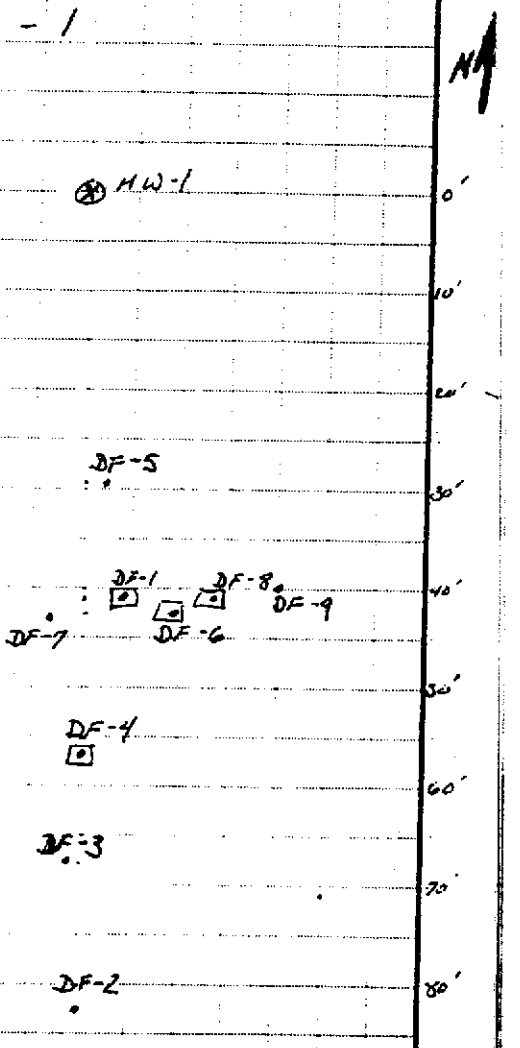
CHECKED BY _____ DATE _____

SCALE _____ 7-17

Origin = 5.44 Ft. MSL NGVD (Nati. Geodetic vertical Datum 1929)
from Michael Kuesek - Surveyor
↳ SP?

Locations of DF wells:
All locations measured relative to MW-1

MW-7	150.5' S	~~4' E~~ 0' E ERA 9/11
DF-1	41.6' S	4' E
DF-2	82.3' S	0' E
DF-3	67.6' S	1' W
DF-4	56.3' S	0' E
DF-5	29.3' S	4' E
DF-6	42' S	9' E
DF-7	43.8' S	3' W
DF-8	41.4' S	12' E
DF-9	39.8' S	20' E
DF-		



⊡ Borings which penetrated drainfield ERA 8-3-87

Measured Tide gage (Herbert's)
1.17' @ 8:30

Decon procedure for spoon
① Alconox wash
② DI rinse
③ isopropynol rinse
trash can, in which composite samples were mixed, were decontaminated using the same procedure as for the spoon.

Samples were obtained from boreholes which twinned DF-1, DF-6, and DF-8

No
Date 11/23 Page 1

Port Everglade, Amoco

Geologist J. GRIFFIN

- Arrive on site w/ drillers at 11:00.
Locate boring site and drillers set up. Near location of previous soil Boring SB4-6, 15 ft. south of concrete pad.

JM HENSLEY Drilling, Inc.
983 4167
[Philip Alex] Drillers
[Duane Crippen]

~~Rock~~
Limestone @ 10 F.
Hit water at approximately 5 ft.

0-10 BLACK, SLTY-SD, ~~OILY~~ PETROLEUM ODOR, SME CLY, Auger ctgs are ribbons.

10-12 consolidated rock - no returns

No
Date Page

Mr Greene w/ D&J construction picked up the Amoco key to the gate

6" bore hole — 6 sacks of coarse Qtz SAND for Filter Pack
2" casing
10' slotted screen
1.5 to 2 feet riser
0.3 FT STICKUP

Hold	Cal	DTW
5.0	1.88	4.12

Develop 2:50 / 5 gal
5 gal
5 gal

$(.25)^2 \times \pi = .1963 \times 7.88 = 1.547$ ft²
$\times 7.48052$ gal/ft³ = 11.57 gal

purge at least $\times 5 = 57.86$ gal

No
Date Page

	Hydro lab		Calib	11/23/87 12:20
TEMP	22.1°C			
STD	147	718	1413	
READ	155	719	1467	
STD	4	7	10	
READ	4.43	6.9	10.1	

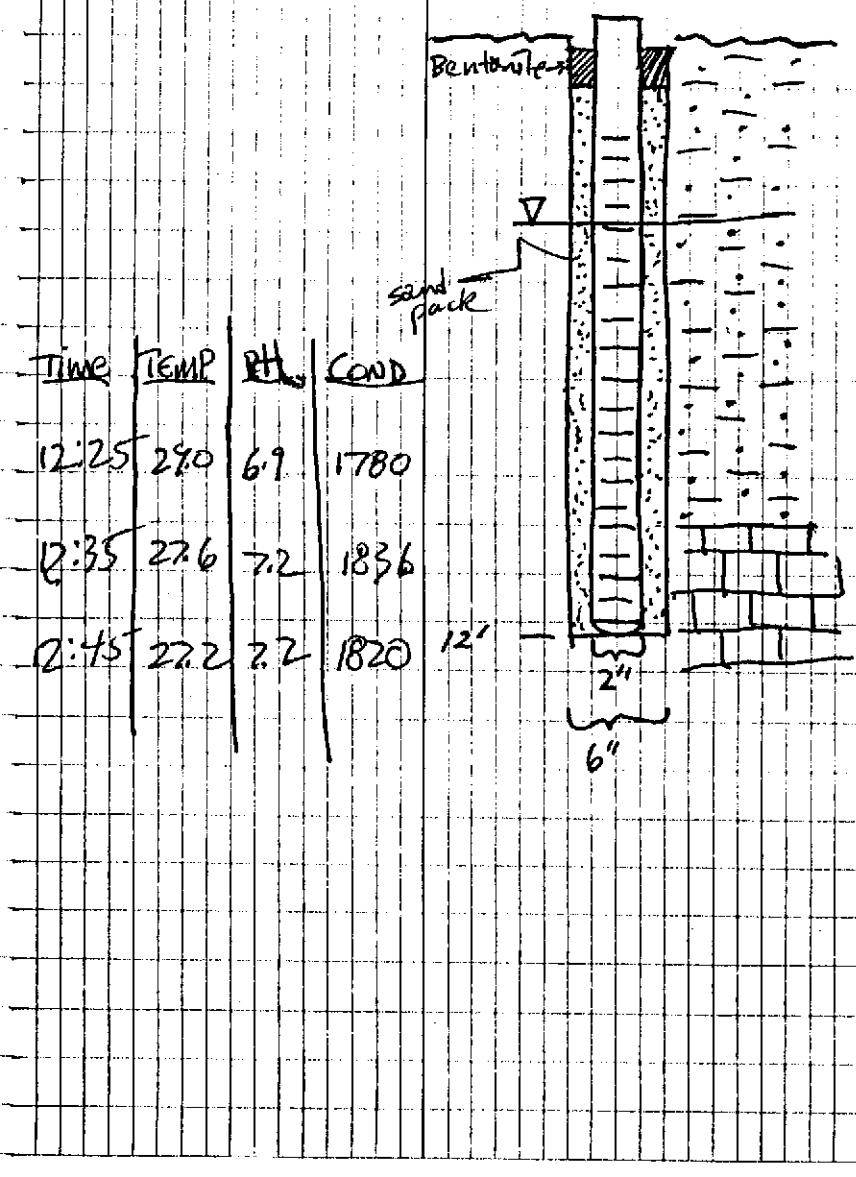
Purged 55 gallons

Field Analyses

Time	Temp	pH	Cond
13:00	27.2	7.4 7.3	1828

Sample	Time		
	13:10	3 VOA	2 LC

No
Date Page



Time	TEMP	PH	COND
12:25	28.0	6.9	1780
12:35	27.6	7.2	1836
12:45	27.2	7.2	1820

Amoco Corporation
7201 East 38th Street (Space 7253)
Post Office Box 3385
Tulsa, Oklahoma 74102

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'86 DEC 18 PM 12 29

Gene W. Schmidt
Director, Groundwater Management

Environmental and Energy Conservation
Environmental Affairs and
Safety Department
918-660-3218

November 7, 1986

FLA. DEPARTMENT OF
ENVIRONMENTAL REG.
WEST PALM BEACH

CMS 86-822

Ms. M. Wu
Broward County EQCB
500 S.W. 14th Court
Ft. Lauderdale, FL 33315

Dear Ms. Wu:

Subject: Review of Contaminant Assessment Report For Cliff Berry Property, Ft. Lauderdale, Florida, October 10, 1986

Amoco Oil Company appreciates the opportunity to comment on the subject report.

Amoco is in general agreement that groundwater contamination by the constituents for which analyses were completed is minimal. The principle area of groundwater contamination appears to occur in the area of the storage tanks and the drainfield, as exhibited by the VOC concentrations in samples collected from well no. 1. However, some contamination is also indicated in the area of well no. 9 (Benzene concentration of 2.4 ug/L). Samples collected from other wells had total VOC concentrations of less than 50 ug/L, which is the standard normally implemented by the Florida Department of Regulation in groundwater restoration programs at service stations. Based on the analyses reported, groundwater contamination due to metals and PCB's does not appear to exist. The above comments are made in recognition of the fact that samples were not collected from well nos. 2 and 3. These wells should be sampled, and the results reported. Also, it is emphasized that although groundwater contamination appears minimal, significant soil contamination is present as reported in previous CAR's.

The discussion of the hydrogeology is very general. Based on the data, the principle direction of groundwater flow appears to be southwesterly, at least beneath the southern two-thirds of the property. However, well nos. 2 and 3 were damaged and not measured. These wells are located in the west-central and southwest corner of the site, respectively. Inclusion of measurement data from the wells could alter the interpreted direction of groundwater flow. Also, no explanation is given for the northeasterly direction of groundwater flow in the vicinity of well no. 6. Is it possible that the slight groundwater high depicted in the vicinity of well nos. 1,7,11, and 12 is a result of past discharge of water to the drainfield?

RECEIVED
NOV 13 1986
Broward County
ENVIRONMENTAL QUALITY CONTROL BOARD

The authors state,

> "the 'basal' two units are the most sensitive units, as they can be considered to be the top of the aquifer and best able to transport contaminants. Figure 5 shows that this zone is closest to the surface (hence closest to the source of contamination) in the south central part of the site. Figure 4 shows that this fortunately does not exactly correspond to the area with the thinnest clay zone. In other words, the most permeable units on the site are protected by at least 5 ft of fill and clay, and the site where the protective units are thinnest is nonetheless covered by 2 feet of relatively impermeable clay."

This statement is misleading. In fact, basal sand and limestone are 5.5 ft below grade in the area of TB 4, and only 2.5 ft of clay is present above the basal units. The depth to the basal sand and limestone in TB 6 is given as 9.5 ft below grade. However, figure 4 indicates that only 0.5 ft of "relatively impermeable " peat is present above the basal units. Based on the above, it is doubtful that the clay layer can function as a barrier to downward movement of contamination in this area.

Several of the items of investigation requested by BCEQCB in their letter dated June 4, 1986, were not supplied in this report. These items include:

1. estimates of vertical and horizontal permeability other than usuage of the terms "relatively permeable, relatively impermeable, and low permeability".

2. determination of the rate of groundwater flow.

3. an inventory of all wells within a one mile radius of the site.

4. has a QA/QC plan been submitted?

As mentioned in my recent correspondence, Amoco desires to continue the opportunity to comment on any reports that are forthcoming concerning this property. Also, Amoco would appreciate continued participation in any meetings which are held to discuss work or results of investigations at the site. Thank you for your cooperation.

Sincerely,

T Hogel

T. Gogel
Certified Ground Water Professional

TG:mph
86311ART0133

cc: R. G. Farmer, Chicago
M. P. Hubbarth, Chicago
J. A. Lamping, Chicago
J. Pickett, Chicago
G. W. Schmidt, Tulsa
C. B. Smiley, Ft. Lauderdale
S. B. Thomas, Chicago

Notes On CAR

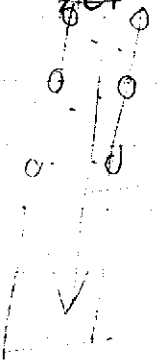
Page 1 Intro + Background

Paragraph 2 states that the preliminary investigation utilized trenches to sample for 602 series compounds - this will not yield accurate results.

Results:

soil boring 3 (0 to 1') & soil boring 6 (14'-15') showed PCB's @ 2.0 & 1.5 ppm in soil. / no sampling of groundwater in these locations for PCB's also found in lesser concentrations in ditch sediments

~~Page 2~~ No mention here of PCB's being found in drainfields 1+2 ~~Yet~~ recommendation #4 states there is



1st paragraph " Various 602 compounds such as xylene, benzene, 1,3- & 1,4 dichlorobenzene are present in all borings except 9 & 10 at low. levels.

* i.e. looking at <u>benzene</u> in the soil borings

TB 2 - Water Table/soil interface 14.9 ppm
14-15' 23.0 ppm

TB 3 - 14-15' 13.1 ppm

TB 4 - 14-15' 17.8 ppm

TB 8 Water Table/soil inter. 14.8 ppm

TB 12 " 12.6

listed Hazardous Waste in any conc.

∴ 6 soil borings show benzene in the soil at or below the water table surface. Benzene is a known carcinogen to humans, & drinking water standard as outlined in FAC 17-22 sets the MCL @ 1 ppb. No sampling of ∅ in G.W. at these TB locations.

& Xylene a listed RCRA Hazardous waste 40 CFR 261 subpart D.

when a petroleum fuel spill or leak occurs and product is discharged to the soil, it will seperate into 3 phases.

1) Vapor phase within soil matrix
2) liquid, floating product phase on water
3) soluable phase dissolved in g.w.

Lead is found in every soil sample but only 1 leach test (on worst case) was done

* "Groundwater Samples
of the parameters analyzed. phenols are the only compounds found in the monitoring wells at Cliff Berry. Inc. in concentrations which exceed groundwater standards".
* B.C. EQCB standard is 1ppb
" also has a standard for PCB's of 1 part per trillion, but were NOT sampled for in the two soil borings where PCB's were found.
* Similiarly, soil borings containing significant levels of benzene, xylene, 1,2 - 1,3 & 1,4 dichlorobenzene, were not sampled for in the groundwater at those locations.

Additionally, NO groundwater samples were analyzed for Barium which has an MCL of 1 ppm under State Standards standing water in trench SB-4 was analyzed for barium and the result was 1.53 ppm.

Test Boring #1 Barium Conc. ↑ c depth
" 2 " " " "
" 3 " " ↑ then ↓ c depth
" 4 " " ↓ c depth
" 5 " " ↑ c depth

~~Missing Page 18 of CAR~~

Have 2 page 28s " "

T.B. #6 Barium Conc ↑ c depth
" 7 " " ↑ " "
" 8 " " " "
" 9 " " ↓ " "

has lowest Ba concs. although same sequence of lithologies is found. however this is furthest northern Test Boring & closest to road.

TB #10 Barium Conc. ↑ c depth
TB 12 " " ↑ " "

Discussion & Recommendations

"The clay layer present throught the site at Cliff Berry seems to prevent the majority of contamination found in the soil from reaching the ground water"

* I find this statement to be somewhat inaccurate!

For example Test Boring # 6 according to the geologic log, has virtually all the "clay" in that area replaced by gravel, (from 2' to 9') with only a ½ foot of peat below.

* In this boring at the bottom of the hole (15') Chromium, Xylene, Toluene and PCB 1260 were detected

Additionally:

TB #1	@ 15'	showed	Barium	@ 1,190ppm
TB # 2	" "	"	Benzene	" 23 ppm
" 3	" "	"	"	" 13 ppm
" 4	" "		"	" 17 ppm
" 5	" "	"	xylene & 1,4 Dichloro	
			at 13.8 ppm & 7.2 ppm	
" 7	" "	"	chromium @ 30 ppm	
* " 9	" "	"	Oil & grease @ 1,544	

geologic log depicts clay at this location from 1.2' to 12'

Page 3 continued -

" This low permeability clay layer appears to cover the entire area;

* No permeability tests were ever submitted with the CAR Evidence of the unit is found in every boring.

No! * It is absent in TB #6

Paragraph 3

... " Overall, data from soil collected using a split spoon and soil from the trench correspond fairly well.

No!	WB4A @ 4-5'	TB-5 (4-5')
Barium	210 ppm	646 ppm
Chromium	1.9 "	8.6 "
Lead	< 1.0 "	9.9 "
Oil + grease	205 ppm	1,419

Recommendations for Remedial Action.

1) Recommends Monitoring the 6 monitoring wells for the next Two years for Barium as well as other parameters
   - Why wasn't barium sampled for in the monitoring wells this time?
   - Why have 602 compounds been deleted from the sampling? No groundwater flow directions.
2) Suction lysimeters are insuffient for sampling because you need to big a volume of water.
   Lysimeters are utilized for measuring Moisture content of soil.

3) 10,000 ppm oil/greare is to high a cut-off for soil excavation
   Asked for Feasibility Study.

4) Drainfields 1 & 2 need to be excavated but no plan for this was submitted.
   PCB's are said to have been found in the soil & water but no results were reported.

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

500 S.W. 14th Court
Fort Lauderdale, Florida 33315
(305) 765-5881

RECEIVED
'87 MAR 16 PM 2 39

FLA. DEPT. OF
ENVIRONMENTAL REG.
WEST PALM BEACH

March 9, 1987

Mr. Cliff Berry
Cliff Berry, Inc.
P.O. Box 13079
Port Everglades
Ft. Lauderdale, FL 33316

Dear Mr. Berry:

A review of the Cliff Berry site in Port Everglades indicates that we are ready to proceed with phase I of the Remedial Action Plan. Phase I should deal with a definition of the extent of vertical soil and water contamination. This study should address the following questions:

1. What is the history of this site? Describe episodes of contaminant introduction to the site. Support the discussion with aerial photographs. Where are the gravel drainfields and other excavations located? Discuss the dimensions of these excavations. The consultant should discuss the feasibility of using geophysical techniques to define the excavated areas.

2. Define the interface of the groundwater with adjacent surface water bodies.

3. Supply an inventory of all wells within a one-mile radius from the site.

4. Provide estimates of vertical and horizontal permeability.

5. Determine the rate of groundwater flow.

6. Describe a plan in which background levels will be established for soil and groundwater cleanup. The locations of the samples to be collected for defining water and soil background levels must be approved by EQCB prior to collection.

7. A summary of all EP Toxicity data collected at the site should be submitted. Discuss the feasibility of additional sampling for EP Toxicity.

8. A summary of PCB data collected at the site should be submitted. Discuss the feasibility of additional sampling for PCB's. A site specific QAPP addressing the sampling and analysis of PCB's should be forwarded.

9. A summary of detergents (MBAS) data collected at the site should be submitted. Discuss the feasibility of additional sampling for MBAS.

10. Discuss the sources of barium, PCB's and detergents (MBAS) at the site.

11. The well completion reports for monitor wells #7 - #12 should be submitted on individual forms.

12. Soil profile data from all monitor wells and descriptions of the stratigraphy of the trenches should be submitted.

13. Monitor wells #2 and #3 should be repaired and sampled to provide the information from these wells which was excluded from the Contamination Assessment Report.

14. A site inspection revealed that several monitor well caps were broken. All monitor wells must be properly maintained.

15. A map is attached. The map shows the locations of eighteen recommended borings (minimum 20' deep) and two recommended monitor wells. The borings should evaluate vertical extent of contamination. Therefore, the deepest sample in each boring should show absence of contamination. Safeguards to protect against spreading contamination vertically and against collecting unrepresentative samples should be addressed. The monitor wells should be constructed to the same depth as previous wells. The screen should extend from two feet above the water table to five feet below the base of the clay layer. Your response should include your plan for evaluating vertical soil contamination and the monitoring of groundwater in the vicinity of TB-2 and TB-4.

If any questions should arise, please contact Harvey Schneider.

The information requested should be forwarded to EQCB no later than April 12, 1987.

We look forward to receiving and reviewing this information so that we can proceed with phase II, specific actions to address the remediation of the water and soil contamination.

Sincerely,

Victor N. Howard

VICTOR N. HOWARD, P.E.
POLLUTION CONTROL OFFICER

cc: J.S. Benyon (DER/WPB)
Janet Peterson (Enviropact)
J.D. Pickett (Amoco Oil Co.)
J.E. Brenman (Consultant Engineer)

VNH/HS/sc
W3/ltrCBerry3

LETTER OF TRANSMITTAL

FROM:
ENVIROPACT, INC.
4790 N.W. 157th STREET
HIALEAH, FLORIDA 33014
(305) 620-1700

DATE: JOB NO.:

RE:

TO: D.E.R. - S.E. Fla District

ADDRESS: P.O. Box 3858

CITY: West Palm Beach, FL 33402-3858

ATTENTION: Ron Lane

PLEASE BE ADVISED:

WE ARE SENDING YOU ☑ ATTACHED ☐ UNDER SEPARATE COVER VIA THE FOLLOWING:

☐ PRINTS ☐ PLANS ☐ SHOP DRAWINGS ☐ SAMPLES ☐ SPECIFICATIONS

☐ ARTWORK ☐ PROOFS ☐ PHOTOGRAPHS ☐ COPY OF LETTER ☐ CHANGE ORDER

☐

	NO.	DATE	COPIES	DESCRIPTION
1		10-10-86	1	Contamination Assessment Report, Cliff Berry, Inc.
2				
3				
4				
5				

THESE ARE BEING TRANSMITTED AS INDICATED BELOW:

☐ AS REQUESTED ☐ APPROVED AS IS ☐ SUBMIT COPIES FOR DISTRIBUTION

☐ FOR APPROVAL ☐ APPROVED WITH CORRECTIONS ☐ RETURN CORRECTED

☐ FOR YOUR USE ☐ RETURNED WITH CORRECTIONS ☐ RETURNED AFTER LOAN TO US

☑ FOR YOUR COMMENTS ☐ RESUBMIT COPIES FOR APPROVAL ☐

☐ FOR BID(S) DUE

COMMENTS: Sent to you per Madeline Wu, BCEQCB request

SIGNED: Janet M. Peterson
Senior Geologist

Enviropact, Inc.
Environmental Consulting and Analysis

'86 DEC 8 AM 10 32

CONTAMINATION ASSESSMENT REPORT FOR GROUNDWATER AT

CLIFF BERRY, INC.
PORT EVERGLADES, FLORIDA

PROJECT NO. 1143-0001

OCTOBER 10, 1986

SUBMITTED TO:

BROWARD COUNTY ENVIRONMENTAL
QUALITY CONTROL BOARD
500 S.W. 14 COURT
FT. LAUDERDALE, FLORIDA 33315

AND

FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION
SOUTHEAST FLORIDA DISTRICT
P.O. BOX 3858
WEST PALM BEACH, FLORIDA
33042-3858

SUBMITTED BY:

ENVIROPACT, INC.
4790 N.W. 157 STREET
HIALEAH, FLORIDA
33014-6421

Janet M. Peterson
J.M. PETERSON
SENIOR GEOLOGIST

INTRODUCTION AND BACKGROUND

Enviropact, Inc. has been conducting an on-going contamination assessment project at the former site of Cliff Berry, Inc., 1000 S.E. 28 Street in Port Everglades, Fort Lauderdale, Florida since April of 1985. The following report describes the results of the latest phase of groundwater contamination assessment. The project described below was conducted according to specifications outlined in the letter from Broward County Environmental Quality Control Board (BCEQCB) to Cliff Berry, Inc. dated June 4, 1986.

The Contamination Assessment Report (CAR) for Cliff Berry, Inc. submitted to BCEQCB and the Florida Department of Environmental Regulation (DER) on March 7, 1986 found essentially no groundwater contamination in the monitoring wells installed and sampled in early 1986. To expand upon the March 7, 1986 CAR and to verify the data from that report, six additional monitoring wells were installed on the site (see Figure 1), and ten of the total of 12 wells were resampled. Two of the monitoring wells installed in January 1986 (MW 2 and MW 3) were damaged while the site was cleared of equipment in accordance with BCEQCB request, and the results of the analyses of groundwater samples from these two wells will be submitted to the BCEQCB at a later date.

GROUNDWATER SAMPLING AND ANALYSIS

Six new monitoring wells (MW 7 through MW 12 on Figure 1) were installed on August 26 and 27, 1986. Four of the wells are located along the perimeter of the site, and two of the wells are located in the central portion of the site. The wells are constructed in the same manner as the wells installed in January 1986: two feet of riser casing and seventeen feet of well screen, and secured with either a locking steel casing or a flush mount. Augers and the rig were steam cleaned between boreholes. See Figure 2 for well construction details, and drilling logs and Well Completion Reports in Appendix 2.

After allowing the wells to equilibrate for two weeks, groundwater samples were collected and analyzed for EPA test series 602 compounds (these include benzene, toluene, and xylene), individual phenolic compounds, total arsenic, zinc, barium, and lead, and oil and grease. Samples from monitoring wells numbers 7, 10, and 11 were also analyzed for polychlorinated biphenyls (PCB). Analytical results are attached in Appendix 1 (Laboratory report number 18478).

The elevation of the top of the PVC casing on the ten workable wells was surveyed, and water table elevations were measured on October 3, 1986 [redacted]. We planned to also measure water levels in the borrow ditches around the edges of the site, but these were dry on the day we were collecting these measurements.

RESULTS

1. Groundwater Quality Analysis

Tables I and II contain the results of metals, volatile organic compounds (test method 602), and oil and grease determinations. No arsenic, phenolic compounds, or PCB's were found by this study. Barium and zinc were detected in every sample, but except for the level of zinc in the sample from well 5 (southeast corner of the site), all concentrations can be considered "natural". [redacted] The metals concentrations in the groundwater samples are not a significant contamination problem.

Table 2 contains the concentrations of the 602 compounds and oil and grease found in the groundwater samples. [redacted] was found in the sample from [redacted] The sample from well 1 also contained 12 mg/l of oil and grease. [redacted] An insignificant amount of oil and grease was detected only in one other well (well 12, 1.0 mg/l). Again, the levels of 602 compounds and oil and grease in the groundwater samples collected for this study are not a significant contamination problem.

2. Hydrogeological Parameters

Figure 3 shows a generalized stratigraphic section for the upper 15 feet of sediment at the former Cliff Berry, Inc. site. This is taken from the geologic logs of soil borings done in December 1985, which are attached in Appendix 3.

The upper zone of the aquifer at this site can be subdivided into four units. The upper 3 feet are composed of fill materials of many different types: clay, sand, silt, wood,

and concrete. This layer is present in each soil boring, and was found in each monitoring well. The silt and sand components are relatively permeable both in the horizontal and vertical directions. The clay component is relatively impermeable in both directions. The permeabilities of concrete and wood are extremely low, but may be increased in either the horizontal or vertical direction by the orientation of the pieces of wood or concrete.

Below the fill material is a layer of clay and peat, which is an average of 5 feet thick, but varies from 0.5 feet in TB6 to 11 feet in TB9 (see Figure 4). This layer is present in every boring and monitoring well, and has a low permeability, both in the horizontal and vertical directions. Figure 4 is an isopach map of the clay layer, and shows that the clay layer is thin in the center of the site, and thickens to the north, south, and west.

Below the clay and peat layer is a layer of permeable sand which is an average of two feet thick. This layer is present in every boring except for TB10; [redacted] Figure 5 shows the variations in the depth to this permeable layer over the site.

The "basal" unit in each soil boring and monitoring well is a sandy limestone which is loosely cemented, and [redacted] in both the horizontal and vertical directions.

The "basal" two units at the Cliff Berry site are the most sensitive units, as they can be considered to top of the aquifer and best able to transport contaminants. Figure 5 shows that this zone is closest to the surface (hence closest to the source of contamination) in the south central portion of the site. Figure 4 shows that this fortunately does not exactly correspond to the area with the thinnest clay zone. [redacted]

The water table elevations in Table III are plotted and contoured on Figure 6. These measurements indicate that in October 1986 groundwater flow direction over most of the site was to the south-southwest.

DISCUSSION

The following conclusions can be drawn from the various phases of site assessment at Cliff Berry, Inc. in Port Everglades:

1. Despite the levels of contamination in the soil samples and water samples collected from the trenches dug in April 1985, no significant groundwater contamination exists at the site.

2. The clay layer prevents vertical migration of contaminants into the aquifer, and also prevents the horizontal spread of contamination from the oil/water separator area to the south (as indicated by the groundwater flow direction survey for this study) or east (if one assumes that the groundwater flow directions are influenced by tides and therefore flucuate in direction).

TIME TABLE FOR FEASIBILITY STUDY / REMEDIAL ACTION PLAN

A feasibility study of alternatives for remedial action will be conducted and a remedial action plan will be developed and submitted to BCEQCB within 90 days of receipt of written approval of this CAR.

TABLE I

METALS IN GROUNDWATER

WELL NO.	PARAMETER (mg/l) BARIUM	LEAD	ZINC
1	0.02	0.01	0.13
2	—	—	—
3	—	—	—
4	0.02	0.02	0.08
5	0.06	0.09*	0.46
6	0.03	< 0.005	0.02
7	0.09	< 0.005	0.06
8	0.01	0.008	0.03
9	0.08	< 0.005	0.03
10	0.05	0.01	0.06
11	0.01	< 0.005	0.03
12	0.02	< 0.005	0.06

* Concentration above MCL (FAC 17-22.104)

Enviropact, Inc.
Environmental Consulting and Analysis

TABLE II

602 COMPOUNDS AND OIL/GREASE IN GROUNDWATER

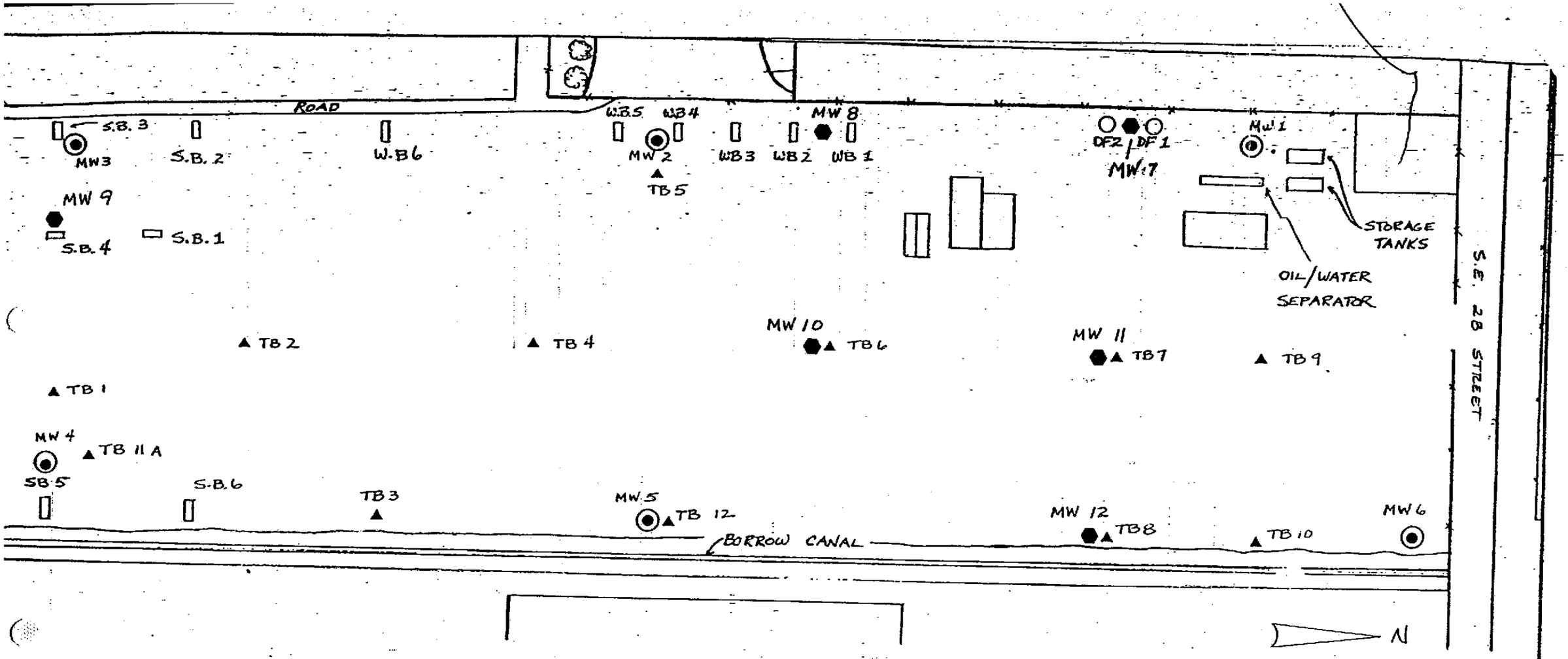
WELL NO.	PARAMETER				
	XYLENE µg/l	TOLUENE µg/l	BENZENE µg/l	ETHYL BENZENE µg/l	OIL/GREASE mg/l
1	74.8	< 1	[redacted]	< 1	12
2	—	—	—	—	—
3	—	—	—	—	—
4	2.9	< 1	< 1	< 1	< 1
5	2.5	1.4	< 1	< 1	< 1
6	< 1	20.4	< 1	< 1	< 1
7	7.6	< 1	< 1	2.0	< 1
8	< 1	< 1	< 1	< 1	< 1
9	< 1	< 1	[redacted]	3.1	< 1
10	< 1	< 1	< 1	< 1	< 1
11	< 1	< 1	< 1	< 1	< 1
12	< 1	< 1	< 1	< 1	< 1

* Concentration above MCL (FAC 17-22.104)

TABLE III

WATER TABLE ELEVATION DATA
(IN FEET)

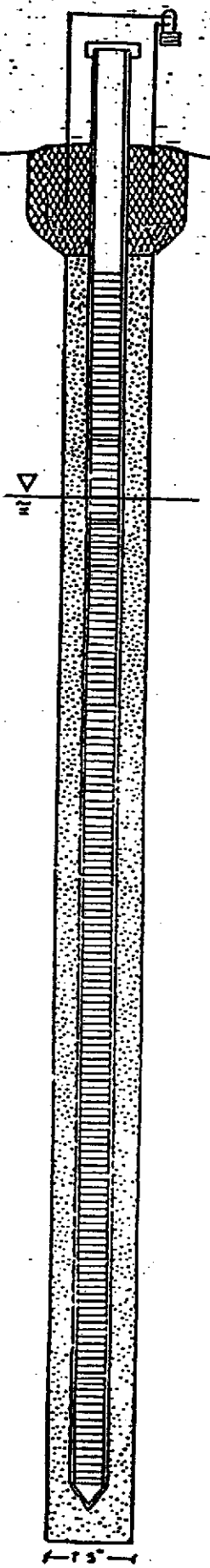
WELL NO.	CASING ELEVATION	DEPTH TO WATER	WATER TABLE ELEVATION
1	9.58	6.0	3.58
2	—	—	—
3	—	—	—
4	9.19	5.92	3.27
5	7.54	4.25	3.29
6	6.53	3.33	3.20
7	6.72	3.50	3.22
8	8.12	4.83	3.29
9	9.35	6.50	2.85
10	7.10	3.75	3.35
11	6.55	3.17	3.38
12	5.55	2.17	3.38



LEGEND

- ◉ MONITORING WELL INSTALLED 1/8-9/86
- ▲ SOIL BORING TAKEN 12/20/85
- ▯ TRENCH SAMPLED 4/85
- ⬢ MONITORING WELL INSTALLED 8/26-8/27/86

Envirogpact. Inc. Environmental Consulting and Analysis		
CLIFF BERRY, INC.	SCALE APPROX: 1" = 100'	DRAWN BY JMP
		REVISED
SITE SKETCH SHOWING SAMPLING LOCATIONS 1000 SE 28 ST, PORT EVERGLADES		
DATE JULY 1986	APPROVED BY J.M. PETERSON	DRAWING NUMBER FIGURE 1



WELL CONSTRUCTION NOTES

Protective steel riser with locking top, set in cement grout.

Standard 2" ID PVC casing and well screen, Sch 40, ASTM D1785, D2665; consisting of 2 ft. solid riser and 17 ft. screen, 0.01" slot size, 6 slots/inch; capped with PVC coupler and screw cap with vent hole.

Hole backfilled with 6/20 well graded silica filter sand packing material.

Top of screen: 2 ft. below ground level

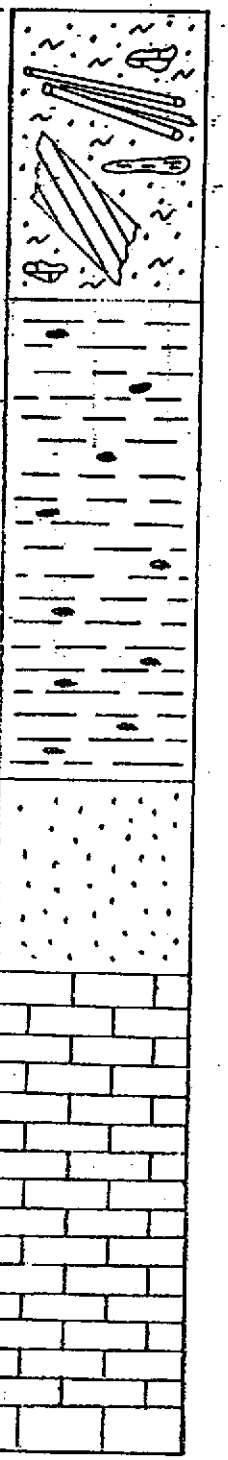
Water table: 5 ft.

Bottom of screen: 19 ft.

Bottom of well: 20 ft.

This construction applies to all wells except M.W. 10 and 11, which have flush mounts to protect top of PVC casing.

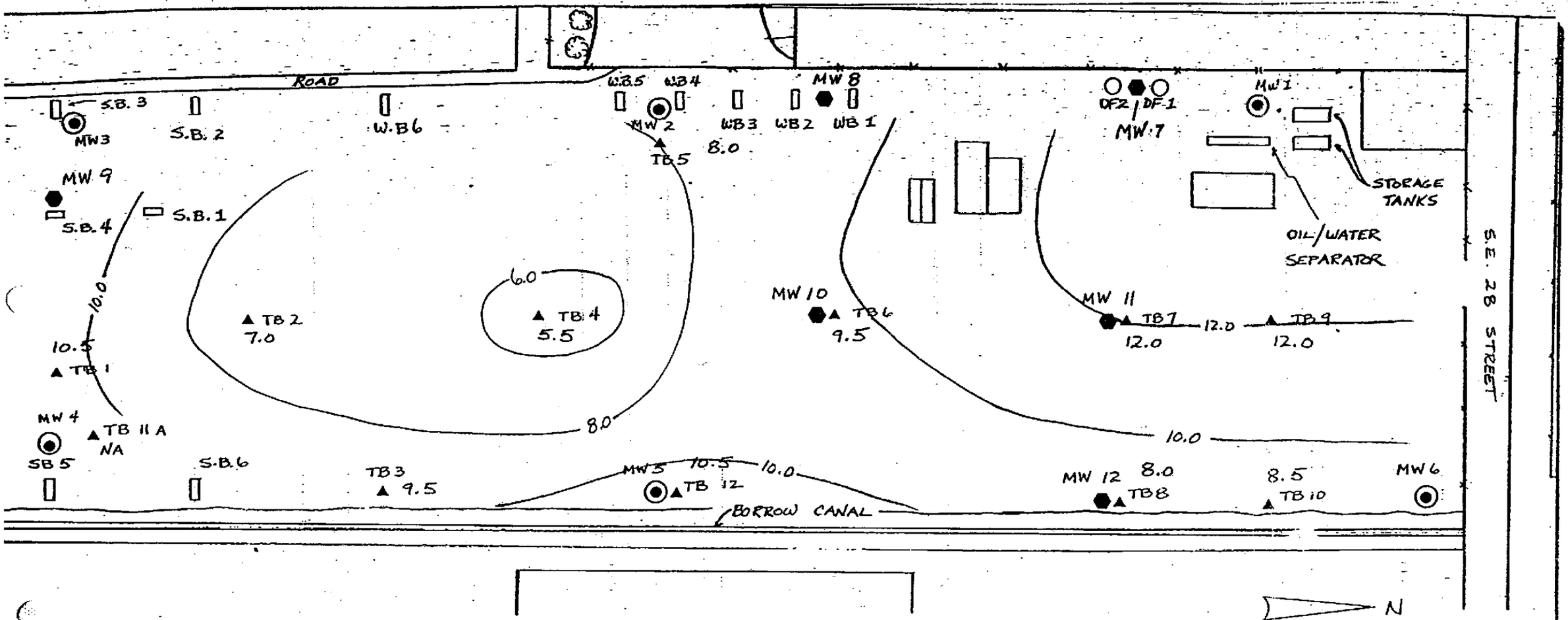
ENVIROPACT INC. ENVIRONMENTAL CONSULTING and ANALYSIS		
Cliff Berry, Inc.	SCALE N.T.S.	DRAWING No. Fig. 2
Well Construction Diagram : Monitoring Well A		
DATE 10-10-86	APPROVED BY J.M. Patterson	DRAWN BY R. Torres



LITHOLOGIC SYMBOL	UNIT DESCRIPTION	PERMEABILITY	DISTRIBUTION
	FILL MATERIAL CLAY, SAND, SILT, CONCRETE, WOOD	VARIABLE	ALL SOIL BORINGS AND WELLS
	CLAY & PEAT	IMPERMEABLE	AT LEAST ONE FOOT THICK IN EACH BORING, EXCEPT TB6, WHERE 0.5 FT. THICK.
	SAND	PERMEABLE	ALL SOIL BORINGS EXCEPT TB 10
	LIMESTONE	PERMEABLE	ALL SOIL BORINGS AND WELLS

Enviropact. Inc. Environmental Consulting and Analysis

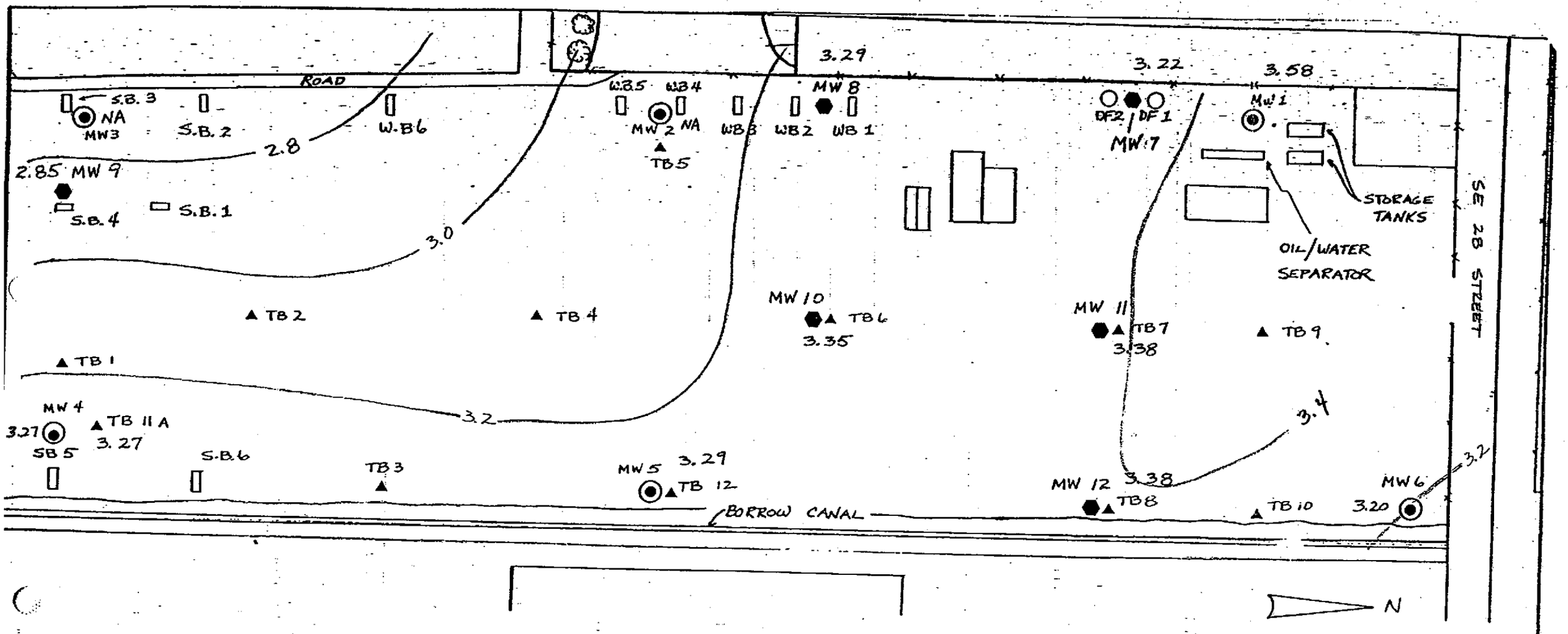
CLIFF BERRY, INC.	SCALE NTS	DRAWN BY JMP REVISED
GENERALIZED STRATIGRAPHIC SECTION		
DATE 10-86	APPROVED BY J. M. PETERSON	DRAWING NUMBER FIGURE 3



LEGEND

- ◉ MONITORING WELL INSTALLED 1/8-9/86
- ▲ SOIL BORING TAKEN 12/20/85
- ▯ TRENCH SAMPLED 4/85
- ⬢ MONITORING WELL INSTALLED 8/26-8/27/86

Enviropact, Inc. — Environmental Consulting and Analysis		
CLIFF BERRY, INC.	SCALE APPROX.: 1" = 100'	DRAWN BY JMP / REVISED
DEPTH TO TOP OF PERMEABLE UNITS IN SOIL BORINGS (C.I. = 2 FT.)		
DATE: JULY 1986	APPROVED BY: J.M. PETERSON	DRAWING NUMBER: FIGURE 5



LEGEND

- ◉ MONITORING WELL INSTALLED 1/8-9/86
- ▲ SOIL BORING TAKEN 12/20/85
- ▯ TRENCH SAMPLED 4/85
- ⬢ MONITORING WELL INSTALLED 8/26-8/27/86

Enviropact, Inc. — Environmental Consulting and Analysis			
CLIFF BERRY, INC.	SCALE APPROX.: 1" = 100'	DRAWN BY JMP	
		REVISED	
WATER TABLE ELEVATION - OCTOBER 1986 (FT ABOVE NGVD.) (C.I. = 0.2 FT)			
DATE JULY 1986	APPROVED BY J.M. PETERSON	DRAWING NUMBER FIGURE 6	

WELL COMPLETION REPORT

FORM 0124
Rev. 4/85

WELL PERMIT NO. _____

CLIFF BERRY, INC. 1000 SE 28 ST FT. LAUDERDALE FL
Owner Address City State Zip

ENVIROPACT, INC. 8-27-86 19 FT 20 FT 7 THRU 12
Contractor's Name License No: Completion Date Casing Depth Total Depth Well #

MORTON PUMP
Driller's Name Registration No.

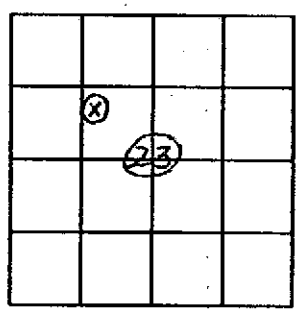
TYPE OF WORK: Construct (✓) Repair ( ) Abandon ( )
WELL USE: Domestic Well ( ) Public ( ) Monitor (✓) Test ( )
Irrigation ( ) Fire Well ( ) Other _____
METHOD: Rotary with MUD ( ) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other HOLLOW - STEM AUGER
STATIC WATER LEVEL ~7 Ft. below top of casing
PUMPING WATER LEVEL NA Ft. after _____ Hrs. at _____ GPM
PUMP SIZE NA H.P. CAPACITY _____ GPM
PUMP TYPE NA INTAKE DEPTH _____ From top of ground

LOCATION
Located Near 1000 SE 28 ST

County BROWARD

SE NW 23 T50S R42E
¼ ¼ Section Township Range

26° 5' 14" 80° 07' 57.5"
Latitude-Longitude



LOCATE IN SECTION

Cuttings sent to District? ( ) Yes (✓) No

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth		Depth (ft) From	Depth (ft) To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes Give color, grain size, and type of material Note cavities, depth to producing zones.
4"			0	1	
CSG	2"		0	2	
SCR	2"		2	19	
			0	3	FILL - SAND, SILT, CLAY, CONCRETE, WOOD
			3	8	CLAY & PEAT
			8	10	SAND
			10	20	LIMESTONE
Number of bags					

Casing: Black Steel ( ) Galv. ( ) PVC (✓) Fiberglass ( )
Screen: Type ASTM Slot size 0.01 IN.
Screened from 2 (ft.) to 19 (ft.)
Type of grout with % additives PORTLAND CMT
Water: Clear (✓) Colored ( ) Sulphur ( ) Salty ( ) Iron ( )
Conductivity NA Chlorides NA mg/l

APPENDIX 3

GEOLOGIC LOG

BORE HOLE NUMBER: TB 1

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-2 ft	Limestone	Soil and light gray-brown clayey limestone
	2-4	Sand	Black fine-grained quartz sand, very organic
	4-5	Sand	Light gray fine-grained quartz sand, some limestone fragments
	5-10.5	Clay	Dark brown-gray clay
	10.5-10.9	Sand	Various colors of fine-grained quartz sand, varies from medium gray at top to black to medium brown
	10.9-15	Limestone	Cream-colored oolitic lime sand, unconsolidated

Sample(s) 0-1,6-7,14-15ft were analyzed (log #15824), all other samples archived. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon coring device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 2

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-15 ft.	Soil	Dark brown organic sand
	1.5-3.0	Sand	Dark brown oolitic (calcareous) sand and rotting wood
	3.0-7.0	Clay	Medium brown-gray clay
	7.0-7.7	Sand	Dark brown-black fine-grained organic quartz sand
	7.7-8.7	Sand	Medium brown medium-grained quartz sand
	8.7-15	Limestone	Cream-colored oolitic lime sand, unconsolidated, compact and hard

Sample(s) 0-1, 4-5, 14-15 ft were analyzed (log # 15824), all other samples archived. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon coring device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 3

CLIENT: Cliff Berry
DRILLING CONTRACTOR: J. M. Hensley Drilling Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-5.0 ft	Sand	Dark-brown-black organic sand, very fine-grained, silty, organic, wood fragment
	5.0-9.5	Clay	Dark brown clay and peat
	9.5-11.8	Sand	Medium gray medium-grained quartz sand
	11.8-13.5	Sand	Light brown fine-grained quartz sand
	13.5-15	Limestone	Cream-colored oolitic lime sand, unconsolidated, compact and hard,

Sample(s) 0-1, 4-5, 14-15 ft. were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140 pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 4

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1 ft	Soil	Brown sandy organic soil
	1-3	Sand	Black medium-grained sand, undetermined odor, (blasting sand)
	3-5.5	Clay	Dark brown clay and peat, more predominant toward base
	5.5-6.2	Sand	Medium gray-brown medium-grained quartz sand
	6.2-15	Limestone	Cream-colored oolitic lime sand, unconsolidated

Sample(s) 0-1, 4-5, 14-15 ft were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 5

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-2.5 ft	Soil	Dark brown sandy organic soil
	2.5-3	Concrete	------
	3-8	Clay	Dark brown-gray clay, peat and wood, one-inch of peat at base
	8-11	Sand	Medium gray-brown medium-grained quartz sand
	11-15	Limestone	Cream-colored oolitic calcareous sand, unconsolidated

Sample(s) 0-1, 4-5, 14-15 ft were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination Procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 6

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-0.5 ft	Soil	Dark brown sandy organic soil
	0.5-2	Sand	Medium brown-gray fine-grained sand, few limestone fragments
	2-9	Gravel(?)	Black sand, clay, gravel, few dark spots which appear oily, metal pieces, soupy silt and asphalt. Poor recovery throughout interval
	9-9.5	Peat	Dark brown-gray peat
	9.5-10.5	Sand	Medium brown-gray medium-grained quartz sand
	10.5-15	Limestone	Cream-colored oolitic calcareous sand unconsolidated,

Sample(s) 0-1, 4-5, 14-15 ft were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination procedures were used.
The above Boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

Envirospact. Inc.
Environmental Consulting and Analysis

DRILLING LOG

MONITORING WELL INSTALLATION
CLIFF BERRY, INC.
AUGUST 26 & 27, 1986
DRILLER: MORTON PUMP & SUPPLY

DATE	ACTIVITY
8-26-86	Arrived on site. Steam cleaned augers and rig. Drilled MW 7 (between DF 1 and DF2). Clay from surface to 19 feet, limestone from 19 to 20 feet. Installed PVC casing and screen. Casing pulled out when pulled out augers. Redrilled and re-installed well. Steam cleaned for next site (MW 8), drilled and installed well. Fill and clay from surface to 17 feet, limestone from 17 to 20 feet. Steam cleaned and installed MW 10. Steam cleaned and installed MW 11. Casing pulled out with augers, redrilled and re-installed MW 11. Steam cleaned and installed MW 12. Casing pulled out again, redrilled and re-installed well. Steam cleaned rig for last well, will install tomorrow.
8-27-86	Arrived on site. Drilled and installed MW 9. Fill and sand from surface to 10 feet, clay from 10 to 15 feet, limestone from 15 to 20 feet. Installed casing, backfill for MW 9. Installed protective steel casing on four perimeter wells, flush mounts on two central wells.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 7

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-0.5 ft	Limestone	Lime rock fill
	0.5-1.5	Clay	Dark brown organic clay, compact, 1 inch of asphalt within layer?, hydrocarbon odor
	1.5-2.5	Peat	Brown-gray clayey peat
	2.5-5	Sand	Light gray, fine-grained sand, slightly calcareous, asphalt within layer?
	5-12	Clay & Peat	Dark Brown-gray organic, clayey peat, becomes light brown last few inches
	12-13	Sand	Medium gray medium-grained sand
	13-15	Limestone	Oolitic sand, unconsolidated, not compacted

Sample(s) 0-1, 6-7, 14-15 ft were analyzed (log # 15824), all other samples archived. Standard sampling and equipment decontamination procedures were used.
The above Boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven-hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 8

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED & SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-2 ft	Soil	Dark brown sandy soil, looks like oil and smells liked diesel, outside of spoon oily
	2-8	Clay & peat	Dark brown-gray clay, grading into peat toward base, saturated with fuel
	8-8.5	Sand	Dark gray medium-grained sand
	8.5-15	Limestone	Cream-colored unconsolidated limestone fragments, cave in this interval

Sample (s) 0-1, 4-5, 14-15 ft. were analyzed (Log # 15824); all other samples archived. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D-1586 drilling and sampling procedures using penetration drilling equipment with a 140 pile driven hammer and one and one-half inch ID, 24 inch long split-spoon coring device.
Boring was abandoned immediately upon completion and backfilled.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 9

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1.2 ft.	Soil	Medium brown sandy soil, limestone fragments
	1.2-12	Clay	Medium gray brown clay, silty at top, contains organic material at base, becomes darker colored with greater organic portion, ordor at 5 ft.
	12-12.5	Sand	Medium brown medium-grained sand
	12.5-15	Limestone	Cream-colored unconsolidated limestone fragments, slightly sandy.

Sample(s) 0-1, 4-5, 14-15ft were analyzed (log # 15824), all other samples archived. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon coring device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 10

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J. M. Hensley Drilling Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1 ft	Soil	Dark brown, organic soil
	1-8.5	Clay & Peat	Dark brown clay, slightly silty from 5 to 6 feet, organic (peat)-rich at base
	8.5-15	Limestone	Cream-colored uncolidated limestone fragments, oolitic, loosely packed, from injection well

Sample(s) 0-1, 4-5, 14-15 ft. were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140 pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 11 A
(TB 11 Failed, hit large piece of wood)

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1 ft	Soil	Light brown-gray limey (?) soil
	1-2.5	Clay	Medium brown compact clay, occasional limestone fragments
	2.5-3	Sand	Medium brown uncompacted medium-grained sand

Hit wood again, no further penetration

Sample(s) 0-1 ft. were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140 pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 12

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1 ft	Soil	Dark brown sandy organic soil
	1-3	Concrete	----------
	3-9	--------	Poor recovery, wood, concrete, dark brown silty clay
	9-10	Clay	Poor recovery, wood, concrete, dark brown silty clay
	10.5-10.5	Sand	Medium gray medium-grained sand
	10.5-15	Limestone	Light brown to cream unconsolidated limestone fragments

Sample(s) 0-1,6-7,14-14 ft. were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140 pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

APPENDIX 1

Enviropact, Inc.
Environmental Consulting and Analysis

4790 N.W. 157th Street
Hialeah, Florida 33014
Telephone: (305) 620-1700
Fla. Watts (800) 432-9706

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86 Collected By: Marlon Monfries
Sample Description:GROUND WATER SAMPLE, NORTHWEST EDGE OF SITE

REPORT OF ANALYSIS : MONITORING WELL 1		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.02	mg/l
LEAD	0.01	mg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	74.8	µg/l
ZINC	0.13	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	4.2	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	12	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

NO PCB'S

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully submitted,

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86 Collected By: Marlon Monfries
Sample Description:GROUND WATER SAMPLE, SOUTHEAST EDGE OF SITE

REPORT OF ANALYSIS : MONITORING WELL 4		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.02	mg/l
LEAD	0.02	mg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	2.9	µg/l
ZINC	0.08	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86 Collected By: Marlon Monfries
Sample Description:GROUND WATER SAMPLE, EASTERN EDGE OF SITE

REPORT OF ANALYSIS : MONITORING WELL 5		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.06	mg/l
[illegible]	0.09	mg/l
[illegible]	1.4	µg/l
XYLENE, TOTAL	2.5	µg/l
ZINC	0.46	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

NO PCBs

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86 Collected By: Marlon Monfries
Sample Description: GROUND WATER SAMPLE, NORTHEASTERN EDGE OF SITE

REPORT OF ANALYSIS : MONITORING WELL 6		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.03	mg/l
LEAD	< 0.005	mg/l
[redacted]	20.4	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.02	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

NO PCBs

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II

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Laboratory Supervisor
Enviropact, Inc.

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P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86
Collected By: Marlon Monfries
Sample Description: GROUND WATER SAMPLE, WESTERN EDGE OF SITE (WB1 AND WB2)

REPORT OF ANALYSIS : MONITORING WELL 8		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.01	mg/l
LEAD	0.008	mg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.03	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

NO PCB's

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86
Sample Description: GROUND WATER SAMPLE, SOUTHERN EDGE OF SITE (S.B. 4)
Collected By: Marlon Monfries

REPORT OF ANALYSIS : MONITORING WELL 9

		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.08	mg/l
LEAD	< 0.005	mg/l
TOLUENE	< 1	µg/l
[redacted], TOTAL	3.0	µg/l
ZINC	0.03	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
[redacted]ENE	2.4	µg/l
[redacted] BENZENE	3.1	µg/l
OIL & GREASE	< 1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

NO PCB'S

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86 Collected By: Marlon Monfries
Sample Description: GROUND WATER SAMPLE, EASTERN EDGE OF SITE (TB 8)

REPORT OF ANALYSIS : MONITORING WELL 12		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.02	mg/l
LEAD	< 0.005	mg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.06	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

No PCB's

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86 Collected By: Marlon Monfries
Sample Description: GROUND WATER SAMPLE, WESTERN EDGE OF SITE (DRAINFIELDS)

REPORT OF ANALYSIS : MONITORING WELL 7		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.09	mg/l
LEAD	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
[redacted]	7.6	µg/l
ZINC	0.04	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
[redacted]	2.0	µg/l
OIL & GREASE	< 1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86
Collected By: Marlon Monfries
Sample Description: GROUND WATER SAMPLE, CENTRAL PORTION OF SITE (TB 6)

REPORT OF ANALYSIS : MONITORING WELL 10		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.05	mg/l
LEAD	0.01	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.06	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

October 8, 1986
Report 18478
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 9/18/86
Sample Description: GROUND WATER SAMPLE, CENTRAL PORTION OF SITE (TB 7)
Collected By: Marlon Monfries

REPORT OF ANALYSIS : MONITORING WELL 11

		UNITS
ARSENIC	< 0.005	mg/l
BARIUM	0.01	mg/l
LEAD	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.03	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
2 -NITROPHENOL	< 10	µg/l
2,4 - DIMETHYL PHENOL	< 10	µg/l
2,4 - DICHLOROPHENOL	< 10	µg/l
2,4,6 - TRICHLOROPHENOL	< 10	µg/l
4 - CHLORO - 3 METHYLPHENOL	< 10	µg/l
2,4, - DINITROPHENOL	< 10	µg/l
PENTACHLOROPHENOL	< 10	µg/l
2-CHLOROPHENOL	< 10	µg/l
2-METHYL-4,6-DINITROPHENOL	< 10	µg/l
4-NITROPHENOL	< 10	µg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Kenneth G. Watkins II
Laboratory Supervisor
Enviropact, Inc.

APPENDIX 2

GENERAL TRIAL PRACTICE
CORPORATION & BUSINESS LAW
ADMIRALTY

LAW OFFICES
OF
JOHN T. DAVID, P.A.
5524 N.W. 19 STREET
MARGATE, FLORIDA 33063
(305) 972-1199

FAMILY LAW
PERSONAL INJURY
WRONGFUL DEATH
REAL ESTATE

RECEIVED
NOV 6 1987
Dept. of Environmental Reg.
West Palm Beach

RECEIVED
SEP 4 1987
Dept. of Environmental Reg.
Office of General Counsel

August 31, 1987

David J. Crowley, Esquire
Office of the General Counsel
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: **Clifford & Betty Berry vs.**
State of Florida, Department of Environmental Regulation
Case No.: 87-0209

Dear Mr. Crowley:

This letter is in furtherance of our telephone conversation of August 27, 1987, regarding the above referenced matter. As we discussed, our purpose is to attempt to achieve a settlement of this matter, in order to avoid further delay in Mr. Berry's development of the subject parcel. This letter, together with the enclosed documents, is being submitted soley for the purposes of settlement, and therefore, is without prejudice to any matter now pending.

As you know, Mr. Berry began the permitting process back in June of 1983. At that time, he was only seeking a permit to develop a site in Port Everglades, Florida, consisting of approximately 3 acres. Since that time, in order to address DER's West Palm office environmental concerns, Mr. Berry purchased a lake which was adjoining the original permitting site. This purchase was with the advise and consent of the DER and was essential, at that time, in getting the project permitted. Unfortunately, the purchase of the property was not enough to safisfy the additional "concerns" of the DER.

It has been the most recent contention of the DER, that Mr. Berry's project should not be permitted because of groundwater contamination existing on the property immediately north of the permitting site. This property was under lease to Cliff Berry, Inc. from Amoco Oil Company. It would seem that the DER's basic concern is about the spread of groundwater contamination from the northern site as a result of the development of the permitting site. It has always been my clients' position that there is not now nor has there ever been a groundwater contamination problem on the northern site or on his site.

I have enclosed the most recent groundwater test results from the northern property. Review of the data demonstrates that, as we have said in the past, there is no groundwater problem at the northern site. While there does appear to be some Benzene in monitor wells 1 and 12, (both of which are at the extreme north end of the northern property) I have been told that the values are so low as to be at the edge of the confidence limits of the gas-chromatographic method of analysis, thereby affecting the reliability of those results. I believe it becomes apparent that there has never been a real groundwater problem at either of these sites. Close review of the prior data which gave rise to the DER's "concerns" about groundwater would demonstrate that reason for any alleged violations was more properly caused by the improper method of sample collection rather than a real environmental problem.

In any event, when you consider the nature of area of the permitting site, it becomes incomprehensible to understand the DER's concern over this development. The permitting site is surrounded by industrial developments, consisting mainly of tank farms and F.P.&L. In fact, Amoco Oil is requesting to go forward with the installation of a tank farm on the northern site. If the DER was so concerned about altering the groundwater hydrology of that immediate area, as they claim Mr. Berry's project would, then why did the DER permit the D.O.T. to dig huge lakes and drive enormous columns into the groundwater tables in the immediate area of the permitting site. The "new" U.S. 1 is no more than two hundred yards from the Berry site.

These surrounding circumstances point to nothing more than the unreasonable denial of the permit by the DER. The enclosed groundwater results point to the fact that the DER has no reason to deny the permit, <u>now</u>! Certainly, there is nothing harmful that this project could cause, especially when one considers the area in which the permit for development is sought. I believe you can understand that if the Appeal progresses and the District Court reverses the Agency's Final Order, this matter will be far from over. There will certainly be claims made for the reimbursement of all attorney fees in accordance with Florida law. There would also be claims made against the local DER and certain individuals therein for the Willful and malicious denial of Mr. Berry's constitutional rights to property, due process and equal protection.

In fact, it would appear to me, that this just may be the proper fact scenario where the new U.S. Supreme Court decisions in First English Evangelical Lutherin Church of Glendale vs. County of Los Angeles, no. 85-1199, June 9, 1987, 55 U.S.L.W. 4781, would be expanded to include the permitting process for the unconstitutional temporary taking of property.

I am aware that your office is very concerned about addressing a jurisdictional conflict with the Division of Administrative Hearing concerning the authority of Remand. Like in many other areas, I disagree with your offices interpretation of the facts of this matter in regard to that issue. However, I would imagine that a better forum or fact scenario would be more suitable to pursue this issue, other than to present that issue intermingled with the facts and circumstances of this case. Certainly, I am not in the position to make a decision on that issue and only note it in passing.

Mr. Crowley, all that I'm really trying to tell you, is that as reasonable men, this matter should be settled for the benefit of all concerned. In an effort to work toward a reasonable solution, we propose the following: First, that the project be permitted, with the only environmental restriction being the "greenery" requirement applicable in the Broward County. Secondly, that Mr. Berry be reimbursed for the attorney fees expended in this matter which now total in excess of sixty-two thousand dollars. In exchange, Mr. Berry will execute general releases to the State of Florida, Department of Environmental Regulation and any and all of its' employees and/or agents for any acts or omissions connected with this matter.

I believe that if you impartially look at the facts contained in the record, and understand that by the very nature of the administrative proceedings we were prevented from fully developing facts that would support a civil rights action, you will come to the realization that this is an extremely fair offer of settlement. This offer demonstrates that Mr. Berry is a concerned citizen of the State of Florida and is only interested in being able to work and contribute to the wellbeing of this State and his family. The settlement of this case is in the best interest of this State and of the Department of Environmental Regulation.

Thank you for the opportunity to present this settlement offer for the reasonable consideration of your office. If I can be of any further assistance or if you have any further questions, please do not hesitate to contact my office.

Very truly yours,

John T. David, Esquire

JTD/anq

enclosures

cc: Clifford Berry

RE
SEP 4 1987
Dept. of Environmental Reg.
Office of General Counsel

ENVIROPACT

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87 Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM NORTHWEST CORNER OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #1		UNITS	DATE
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	2.7	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
NAPHTHALENE	< 0.5	µg/l	7/31/87
ACENAPHTHENE	< 0.5	µg/l	7/31/87
ACENAPHTHYLENE	< 0.5	µg/l	7/31/87
ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (A) ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (B) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (K) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (A) PYRENE	< 0.5	µg/l	7/31/87
BENZO (G,H,I) PERYLENE	< 0.5	µg/l	7/31/87
CHRYSENE	< 0.5	µg/l	7/31/87
DIBENZO (A,H) ANTHRACENE	< 0.5	µg/l	7/31/87
FLUORANTHENE	< 0.5	µg/l	7/31/87
FLUORENE	< 0.5	µg/l	7/31/87
INDENO-(1,2,3-CD) PYRENE	< 0.5	µg/l	7/31/87
PHENANTHRENE	< 0.5	µg/l	7/31/87
PYRENE	< 0.5	µg/l	7/31/87

ENVIROPACT SERVICES, INC.
MIAMI DIVISION
4790 N.W. 157th STREET
MIAMI, FL 33014-6421
305-620-1700

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY

Sample Received: 7/21/87 Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM NORTHWEST CORNER OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #1		UNITS	DATE
METHYL TERT BUTYL ETHER	1.7	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

1143
CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM NORTHEAST EDGE OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #12		UNITS	DATE
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	1.2	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
NAPHTHALENE	< 0.5	µg/l	7/31/87
ACENAPHTHENE	< 0.5	µg/l	7/31/87
ACENAPHTHYLENE	< 0.5	µg/l	7/31/87
ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (A) ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (B) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (K) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (A) PYRENE	< 0.5	µg/l	7/31/87
BENZO (G,H,I) PERYLENE	< 0.5	µg/l	7/31/87
CHRYSENE	< 0.5	µg/l	7/31/87
DIBENZO (A,H) ANTHRACENE	< 0.5	µg/l	7/31/87
FLUORANTHENE	< 0.5	µg/l	7/31/87
FLUORENE	< 0.5	µg/l	7/31/87
INDENO-(1,2,3-CD) PYRENE	< 0.5	µg/l	7/31/87
PHENANTHRENE	< 0.5	µg/l	7/31/87
PYRENE	< 0.5	µg/l	7/31/87

1143
CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY

Sample Received: 7/21/87 Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM NORTHEAST EDGE OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #12		UNITS	DATE
METHYL TERT BUTYL ETHER	18.9	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87 Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM WEST-CENTRAL EDGE OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #2		UNITS	DATE
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Horn

Lawrence J. Horn
Laboratory Director
Enviropact Services, Inc.

1143
CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM EAST-CENTRAL EDGE OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #5		UNITS	DATE
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

1143
CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM SOUTHWEST CORNER OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #3		UNITS	DATE
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	< 1	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
OIL & GREASE	3	mg/l	7/23/87
LEAD, TOTAL DISSOLVED	< 0.005	mg/l	7/23/87
BARIUM (DISSOLVED)	0.14	mg/l	7/30/87
METHYL TERT BUTYL ETHER	< 1	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

1143
CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87 Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM SOUTHEAST CORNER OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #4		UNITS	DATE
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	< 1	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
OIL & GREASE	2	mg/l	7/23/87
LEAD, TOTAL DISSOLVED	< 0.005	mg/l	7/23/87
BARIUM (DISSOLVED)	0.20	mg/l	7/30/87
METHYL TERT BUTYL ETHER	9.8	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

1143
CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM DRAINFIELD AREA.
(NORTHWEST EDGE OF SITE)

REPORT OF ANALYSIS : MONITORING WELL #7		UNITS	DATE
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	< 1	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
NAPHTHALENE	< 0.5	µg/l	7/31/87
ACENAPHTHENE	< 0.5	µg/l	7/31/87
ACENAPHTHYLENE	< 0.5	µg/l	7/31/87
ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (A) ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (B) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (K) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (A) PYRENE	< 0.5	µg/l	7/31/87
BENZO (G,H,I) PERYLENE	< 0.5	µg/l	7/31/87
CHRYSENE	< 0.5	µg/l	7/31/87
DIBENZO (A,H) ANTHRACENE	< 0.5	µg/l	7/31/87
FLUORANTHENE	< 0.5	µg/l	7/31/87
FLUORENE	< 0.5	µg/l	7/31/87
INDENO-(1,2,3-CD) PYRENE	< 0.5	µg/l	7/31/87
PHENANTHRENE	< 0.5	µg/l	7/31/87
PYRENE	< 0.5	µg/l	7/31/87

1143
CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY

Sample Received: 7/21/87 Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM DRAINFIELD AREA.
(NORTHWEST EDGE OF SITE)

REPORT OF ANALYSIS : MONITORING WELL #7		UNITS	DATE
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87
METHYL TERT BUTYL ETHER	4.5	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM NORTH-CENTRAL PORTION OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #11		UNITS	DATE
TOLUENE	1.5	µg/l	7/22/87
XYLENE, TOTAL	8.5	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	< 1	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
NAPHTHALENE	< 0.5	µg/l	7/31/87
ACENAPHTHENE	< 0.5	µg/l	7/31/87
ACENAPHTHYLENE	< 0.5	µg/l	7/31/87
ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (A) ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (B) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (K) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (A) PYRENE	< 0.5	µg/l	7/31/87
BENZO (G,H,I) PERYLENE	< 0.5	µg/l	7/31/87
CHRYSENE	< 0.5	µg/l	7/31/87
DIBENZO (A,H) ANTHRACENE	< 0.5	µg/l	7/31/87
FLUORANTHENE	< 0.5	µg/l	7/31/87
FLUORENE	< 0.5	µg/l	7/31/87
INDENO-(1,2,3-CD) PYRENE	< 0.5	µg/l	7/31/87
PHENANTHRENE	< 0.5	µg/l	7/31/87
PYRENE	< 0.5	µg/l	7/31/87

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August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY

Sample Received: 7/21/87 Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM NORTH-CENTRAL PORTION OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #11		UNITS	DATE
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87
METHYL TERT BUTYL ETHER	4.2	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

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P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM NORTH WEST EDGE OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #8		UNITS	DATE
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	< 1	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87
METHYL TERT BUTYL ETHER	< 1	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM SOUTH CENTRAL EDGE OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #9		UNITS	DATE
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	< 1	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
OIL & GREASE	3	mg/l	7/23/87
NAPHTHALENE	< 0.5	µg/l	7/31/87
ACENAPHTHENE	< 0.5	µg/l	7/31/87
ACENAPHTHYLENE	< 0.5	µg/l	7/31/87
ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (A) ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (B) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (K) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (A) PYRENE	< 0.5	µg/l	7/31/87
BENZO (G,H,I) PERYLENE	< 0.5	µg/l	7/31/87
CHRYSENE	< 0.5	µg/l	7/31/87
DIBENZO (A,H) ANTHRACENE	< 0.5	µg/l	7/31/87
FLUORANTHENE	< 0.5	µg/l	7/31/87
FLUORENE	< 0.5	µg/l	7/31/87
INDENO-(1,2,3-CD) PYRENE	< 0.5	µg/l	7/31/87
PHENANTHRENE	< 0.5	µg/l	7/31/87

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY

Sample Received: 7/21/87 Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM SOUTH CENTRAL EDGE OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #9		UNITS	DATE
PYRENE	< 0.5	µg/l	7/31/87
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87
LEAD, TOTAL DISSOLVED	< 0.005	mg/l	7/23/87
BARIUM (DISSOLVED)	0.20	mg/l	7/30/87
METHYL TERT BUTYL ETHER	1.8	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Director
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August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM SOUTH CENTRAL PORTION OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #13		UNITS	DATE
OIL & GREASE	3	mg/l	7/23/87
LEAD, TOTAL DISSOLVED	< 0.005	mg/l	7/23/87
BARIUM (DISSOLVED)	0.14	mg/l	7/30/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

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Laboratory Director
Enviropact Services, Inc.

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM SOUTH CENTRAL PORTION OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #14		UNITS	DATE
OIL & GREASE	2	mg/l	7/23/87
NAPHTHALENE	< 0.5	µg/l	7/31/87
ACENAPHTHENE	< 0.5	µg/l	7/31/87
ACENAPHTHYLENE	< 0.5	µg/l	7/31/87
ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (A) ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (B) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (K) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (A) PYRENE	< 0.5	µg/l	7/31/87
BENZO (G,H,I) PERYLENE	< 0.5	µg/l	7/31/87
CHRYSENE	< 0.5	µg/l	7/31/87
DIBENZO (A,H) ANTHRACENE	< 0.5	µg/l	7/31/87
FLUORANTHENE	< 0.5	µg/l	7/31/87
FLUORENE	< 0.5	µg/l	7/31/87
INDENO-(1,2,3-CD) PYRENE	< 0.5	µg/l	7/31/87
PHENANTHRENE	< 0.5	µg/l	7/31/87
PYRENE	< 0.5	µg/l	7/31/87
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87

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P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY

Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description: GROUND WATER SAMPLE FROM SOUTH CENTRAL PORTION OF SITE.

REPORT OF ANALYSIS : MONITORING WELL #14		UNITS	DATE
LEAD, TOTAL DISSOLVED	< 0.005	mg/l	7/23/87
BARIUM (DISSOLVED)	0.26	mg/l	7/30/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Laboratory Director
Enviropact Services, Inc.

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P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description:WATER SAMPLE FROM LAKE AT SOUTH SIDE OF SITE.

REPORT OF ANALYSIS : LAKE

		UNITS	DATE
BARIUM	0.20	mg/l	7/30/87
LEAD	< 0.005	mg/l	7/23/87
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	< 1	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
OIL & GREASE	5	mg/l	7/23/87
NAPHTHALENE	< 0.5	µg/l	7/31/87
ACENAPHTHENE	< 0.5	µg/l	7/31/87
ACENAPHTHYLENE	< 0.5	µg/l	7/31/87
ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (A) ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (B) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (K) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (A) PYRENE	< 0.5	µg/l	7/31/87
BENZO (G,H,I) PERYLENE	< 0.5	µg/l	7/31/87
CHRYSENE	< 0.5	µg/l	7/31/87
DIBENZO (A,H) ANTHRACENE	< 0.5	µg/l	7/31/87
FLUORANTHENE	< 0.5	µg/l	7/31/87
FLUORENE	< 0.5	µg/l	7/31/87

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FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY

Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description:WATER SAMPLE FROM LAKE AT SOUTH SIDE OF SITE.

REPORT OF ANALYSIS : LAKE

		UNITS	DATE
INDENO-(1,2,3-CD) PYRENE	< 0.5	µg/l	7/31/87
PHENANTHRENE	< 0.5	µg/l	7/31/87
PYRENE	< 0.5	µg/l	7/31/87
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87
METHYL TERT BUTYL ETHER	< 1	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.

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FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY
Sample Collected: 7/20/87
Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description:WATER SAMPLE FROM DITCH AT EAST OF SITE.

REPORT OF ANALYSIS : DITCH		UNITS	DATE
BARIUM	0.20	mg/l	7/30/87
LEAD	< 0.005	mg/l	7/23/87
TOLUENE	< 1	µg/l	7/22/87
XYLENE, TOTAL	< 1	µg/l	7/22/87
CHLOROBENZENE	< 1	µg/l	7/22/87
1,3-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,2-DICHLOROBENZENE	< 1	µg/l	7/22/87
1,4-DICHLOROBENZENE	< 1	µg/l	7/22/87
BENZENE	< 1	µg/l	7/22/87
ETHYL BENZENE	< 1	µg/l	7/22/87
OIL & GREASE	4	mg/l	7/23/87
NAPHTHALENE	< 0.5	µg/l	7/31/87
ACENAPHTHENE	< 0.5	µg/l	7/31/87
ACENAPHTHYLENE	< 0.5	µg/l	7/31/87
ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (A) ANTHRACENE	< 0.5	µg/l	7/31/87
BENZO (B) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (K) FLUORANTHENE	< 0.5	µg/l	7/31/87
BENZO (A) PYRENE	< 0.5	µg/l	7/31/87
BENZO (G,H,I) PERYLENE	< 0.5	µg/l	7/31/87
CHRYSENE	< 0.5	µg/l	7/31/87
DIBENZO (A,H) ANTHRACENE	< 0.5	µg/l	7/31/87
FLUORANTHENE	< 0.5	µg/l	7/31/87
FLUORENE	< 0.5	µg/l	7/31/87

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P.O. BOX 13079
FT.LAUDERDALE, FL 33316

August 3, 1987
Report 22020
LAB ID. 86119

ATT : CLIFF BERRY

Sample Received: 7/21/87
Collected By: HEATHER DROUIN
Sample Description:WATER SAMPLE FROM DITCH AT EAST OF SITE.

REPORT OF ANALYSIS : DITCH

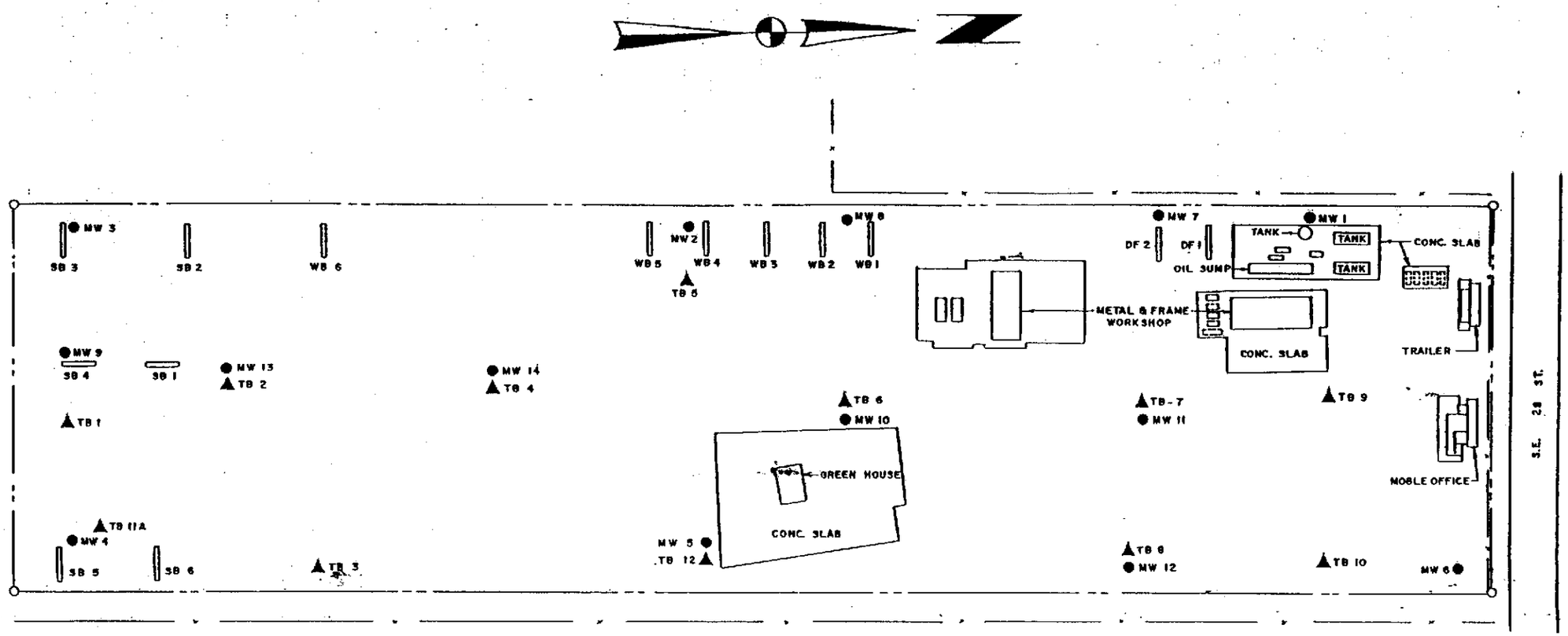
		UNITS	DATE
INDENO-(1,2,3-CD) PYRENE	< 0.5	µg/l	7/31/87
PHENANTHRENE	< 0.5	µg/l	7/31/87
PYRENE	< 0.5	µg/l	7/31/87
PCB 1016	< 1	µg/l	7/28/87
PCB 1221	< 1	µg/l	7/28/87
PCB 1232	< 1	µg/l	7/28/87
PCB 1242	< 1	µg/l	7/28/87
PCB 1248	< 1	µg/l	7/28/87
PCB 1254	< 1	µg/l	7/28/87
PCB 1260	< 1	µg/l	7/28/87
METHYL TERT BUTYL ETHER	< 1	µg/l	7/22/87

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

C.C. BILL KEATS
MIKE AMBROSE
VICTOR HOWARD P.E.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Director
Enviropact Services, Inc.



ENVIROPACT INC.

ENVIRONMENTAL CONSULTING AND ANALYSIS

SCALE: 1" = 100'	APPROVED BY: J.M. PETERSON	DRAWN BY R.T.
DATE: 5-8-87		REVISED

SOIL AND WATER SAMPLING LOCATIONS

CLIFF BERRY IND.	DRAWING NUMBER FIG. 1-4

GENERAL TRIAL PRACTICE
CORPORATION & BUSINESS LAW
ADMIRALTY

LAW OFFICES
OF
JOHN T. DAVID, P.A.
5524 N.W. 19 STREET
MARGATE, FLORIDA 33063
(305) 972-1199

FAMILY LAW
PERSONAL INJURY
WRONGFUL DEATH
REAL ESTATE

RECEIVED
OCT 26 1987
Dept. of Environmental Reg.
Office of General Counsel

October 22, 1987

David J. Crowley, Esquire
Office of the General Counsel
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: **Clifford & Betty Berry vs. State of Florida, Department of Environmental Regulation**

Dear Mr. Crowley:

It has been quite some time since I've heard from you regarding the above styled matter. As I recall, you had stated that in response to my August 31st offer of settlement, that you were waiting for a memo from the West Palm Beach DER, that would explain their opposition to granting Mr. Berry's permit, even though test results from the Northern property unequivocally established that no groundwater contamination existed.

The purpose of this letter is to inform you that while we are more than willing to settle this matter amicably, the terms of our August 31st offer are no longer applicable. Quite frankly, I see no real purpose in describing our new terms for settlement until we get some assurance that the State is willing to bargain in good faith. Please understand that myself and Mr. Berry have been quite satisfied with your forthright approach to this matter. However, as I'm sure you are aware, Mr. Berry is more than displeased and disillusioned with the DER's actions in regard to his permit. The DER's actions have been and are nothing less than arbitrary, capricious and down right malicious.

This fact is more than evident, when you consider the action taken by the West Palm DER on a permit request by 999 Warehouse Limited, Inc. on December 12, 1986. This particular situation is important because on that date, the West Palm DER granted a permit to 999 Warehouse Limited to do substantially the same thing that Mr. Berry had requested in his permit. Furthermore, the subject property is directly adjacent to the Southern portion of Mr. Berry's property and involves the same lake (borrow pit). I have enclosed a copy of the permit along with a drawing which shows approximately where the permit was granted for filing.

Admittedly, the permitted project is much smaller than what Mr. Berry has proposed but I have been informed that the principles are basically the same. More importantly, however, is that the DER did not require groundwater studies, either flow or water quality, to be performed prior to issuing the permit. In fact, review of the DER's file demonstrates that the only tests performed were on sediments and these tests did not show contamination in excess of State standards. Dr. Charles Ouseph and Ron Lane approved the results and joined in the recommendation to issue the permit. Even more astounding is that Ron Lane stated that the permitted project posed no threat to groundwater. This is documented in the DER's own file and directly conflicts with the testimony the DER would presumably try to present, should this matter be remanded. I have enclosed copies of those memos for your review.

It should be kept in mind, that the West Palm DER issued the Dredge and Fill Permit to 999 Warehouse Limited, after the Hearing Officer had recommended the issuance of Mr. Berry's permit, but before the DER issued their final order denying Mr. Berry a permit. Now I'm sure, that the local DER will "come up" with some rational why it was alright to issue a permit to fill the part of the borrow pit owned by 999 Warehouse Limited, but to deny Mr. Berry the right to fill the same borrow pit which he owns. However, I seriously question whether you could ever get a jury in a civil trial to believe that the DER was justified, or was acting fairly and impartially in granting the one permit and denying the other; especially considering the other facts that were before the Hearing Officer.

I still understand that the DER is trying to make procedural law with the Division of Administrative Hearings over this remand issue. However, if you were to prevail on that issue, can you really imagine what other evidence will be brought to light in this case? I can suggest that we will undoubtedly prove again, that there was no groundwater problem, no hazardous waste problem, no environmental habitat problem and we will establish without doubt, that the DER's actions were arbitrary, capricious and malicious.

All legal rational aside, I simply cannot believe that Mr. Berry has been treated this way. It is plainly outrageous behavior on the part of the DER. Unfortunately, the likely outfall of this matter, when the general public finds out about it, is that the

State of Florida and the DER will be put in a very poor light, and the cause of environmental protection will be damaged. This is the course which the DER has, by their own acts, caused to come about. It may have reached the point where nothing else can be done but to see it through to the final conclusion.

If the State has any intention to resolve this matter, please contact my office by no later than November 6, 1987.

Thank you, Mr. Crowley, for your courtesy and cooperation.

Very truly yours,

John T. David, Esquire

JTD/anq

enclosures

cc: Clifford & Betty Berry

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

FILE COPY

mailed 12/15

SOUTHEAST FLORIDA
DISTRICT

P.O. BOX 3858
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33402-3858

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

J. SCOTT BENYON
DISTRICT MANAGER

NOTICE OF PERMIT

DEC 17 1986

Broward County
DF - 999 Warehouse Ltd. Partners

999 Warehouse Ltd. Partners
7220 N.W. 36 Street , Suite 105
Miami, Florida 33166

Enclosed is Permit Number 061201596, to fill 0.53 acres of two borrow pits, issued pursuant to Section(s) 403.087, Florida Statutes.

Persons whose substantial interests are affected by this permit have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing) on it. The petition must conform to the requirements of Chapters 17-103 and 28-5.201, FAC, and must be filed (received) in the Department's office of General Counsel, 2600 Blair Stone Road, Tallahassee 32301, within fourteen (14) days of receipt of this notice. Failure to file a petition within the fourteen (14) days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes. This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with this paragraph or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, FAC. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.168, Florida Statutes, by the filing of an Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filled within 30 Days from the date the Final Order is filed with the Clerk of the Department.

Executed in West Palm Beach, Florida.

STATE OF FLORIDA DEPARTMENT
OF REGULATION

Chris Shea

Chris S. Shea
Environmental Specialist
Dredge & Fill Permitting
3301 Gun Club Road
Post Office Box 3858
West Palm Beach, FL 33402
305/6689-5800

CSS:my

Copies furnished to:
Broward County Environmental Quality Control Board Department
U.S. Army Corps of Engineers
DNR (w/attachments)

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on December 18, 1986 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to the §120.52(10), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Carmella Burba
Clerk

12-18-86
Date

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA
DISTRICT

P.O. BOX 3858
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33402-3858

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

J. SCOTT BENYON
DISTRICT MANAGER

PERMITTEE:
999 Warehouse Ltd.
Partners
7220 N.W. 36 Street,
Suite 105
Miami, Florida 33166

I.D. NUMBER: 5006P92122
PERMIT/CERTIFICATION NUMBER: 061201596
DATE OF ISSUE: DEC 17 1986
EXPIRATION DATE: December 8, 1989
COUNTY: Broward
LATITUDE/LONGITUDE: 26°05'00"/80°07'00"
SECTION/TOWNSHIP: 23/50S/42E
PROJECT: Fill two borrow pits

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-3, 17-4, and 17-12. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with Department and made a part hereof and specifically described as follows:

CONSTRUCT: A parking lot by filling 0.53 acres of two borrow pits with 7,000 cubic yards of clean sand. Associated with this work is the planting of red mangrove seedlings in a .19 acre mitigation area on the edge of the parking lot.

IN ACCORDANCE WITH: The attached stamped drawings, additional information received September 22, 1986, the mitigation plan received December 5, 1986 and Application DER Form 17-1.203(1) dated April 30, 1986.

LOCATED AT: Two borrow pits at 999 Eller Drive, Dania, Broward County.

SUBJECT TO: General Conditions 1-15 and Specific Conditions 1-6.

DER Form 17-1.201(5)
Effective November 30, 1982

PERMITTEE:
999 Warehouse Ltd.
Partners

I.D. Number: 5006P92122
PERMIT/CERTIFICATION NUMBER: 061201596
DATE OF ISSUE: DEC 17 1986
EXPIRATION DATE: December 8, 1989

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules.

PERMITTEE:
999 Warehouse Ltd.
Partners

I.D. Number: 5006P92122
PERMIT/CERTIFICATION NUMBER: 061201596
DATE OF ISSUE: DEC 17 1986
EXPIRATION DATE: December 8, 1989

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the permises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

   a. Having access to and copying any records that must be kept under the conditions of the permit;
   b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
   c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in the permit, the permittee shall immediately notify and provide the Department with the following information:
   a. a description of and cause of non-compliance; and

   b. the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

      The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use in proscribed by Sections 403.73 and 403.111, Florida Statutes.

PERMITTEE:
999 Warehouse Ltd.
Partners

I.D. Number: 5006P92122
PERMIT/CERTIFICATION NUMBER: 061201596
DATE OF ISSUE: DEC 17 1986
EXPIRATION DATE: December 8, 1989

GENERAL CONDITIONS:

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
(X) Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

PERMITTEE:
999 Warehouse Ltd.
Partners

I.D. Number: 5006P92122
PERMIT/CERTIFICATION NUMBER: 061201596
DATE OF ISSUE: DEC 17 1986
EXPIRATION DATE: December 8, 1989

GENERAL CONDITIONS:

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- analytical techniques or methods used; and
- results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

PERMITTEE:
999 Warehouse Ltd.
Partners

I.D. Number: 5006P92122
PERMIT/CERTIFICATION NUMBER: 061201596
DATE OF ISSUE: DEC 17 1986
EXPIRATION DATE: December 8, 1989

SPECIFIC CONDITIONS:

1. Written notification shall be provided to the Department of Environmental Regulation, Southeast Florida District Office in West Palm Beach and Broward County Environmental Quality Control Board, a minimum of forty-eight (48) hours prior to commencement of construction and a maximum of forty-eight (48) hours after completion of construction.

2. If historical or archeological artifacts, such as Indian canoes, are discovered at any time within the project site the permittee shall immediately notify the district office and the Bureau of Historic Preservation, Division of Archives, History and Records Management, R.A. Gray Building, Tallahassee, Florida 32301. DT Adequate turbidity controls shall be taken so that turbidity levels beyond a 50 foot radius of the work area do not exceed 29 N.T.U.'s as per Section 24-11 of the Metropolitan Dade County Code.

3. Turbidity screens shall be utilized during construction to insure that turbidity values 50 feet downstream from the project site do not exceed 29 N.T.U.'s above background.

4. This permit does not relieve the permittee from the need to obtain any other permits (local, state or federal) which may be required.

5. Mangroves shall be placed in the approved mitigation area, as necessary, to maintain 80% survivorship until the Department determines the establishment of mangroves is reasonably assured (three years). At this time the Department will inform the permittee in writing of the fulfillment of this requirement. The permittee shall use healthy seedling stock, adequately sloped and prepared substrate and proper irrigation to insure maximum survival. The permittee shall also secure adequate seedling supply for mortality replacement as necessary to maintain a minimum 80% survival rate.

PERMITTEE:
999 Warehouse Ltd.
Partners

I.D. Number: 5006P92122
PERMIT/CERTIFICATION NUMBER: 061201596
DATE OF ISSUE: DEC 17 1986
EXPIRATION DATE: December 8, 1989

SPECIFIC CONDITIONS CONTINUED:

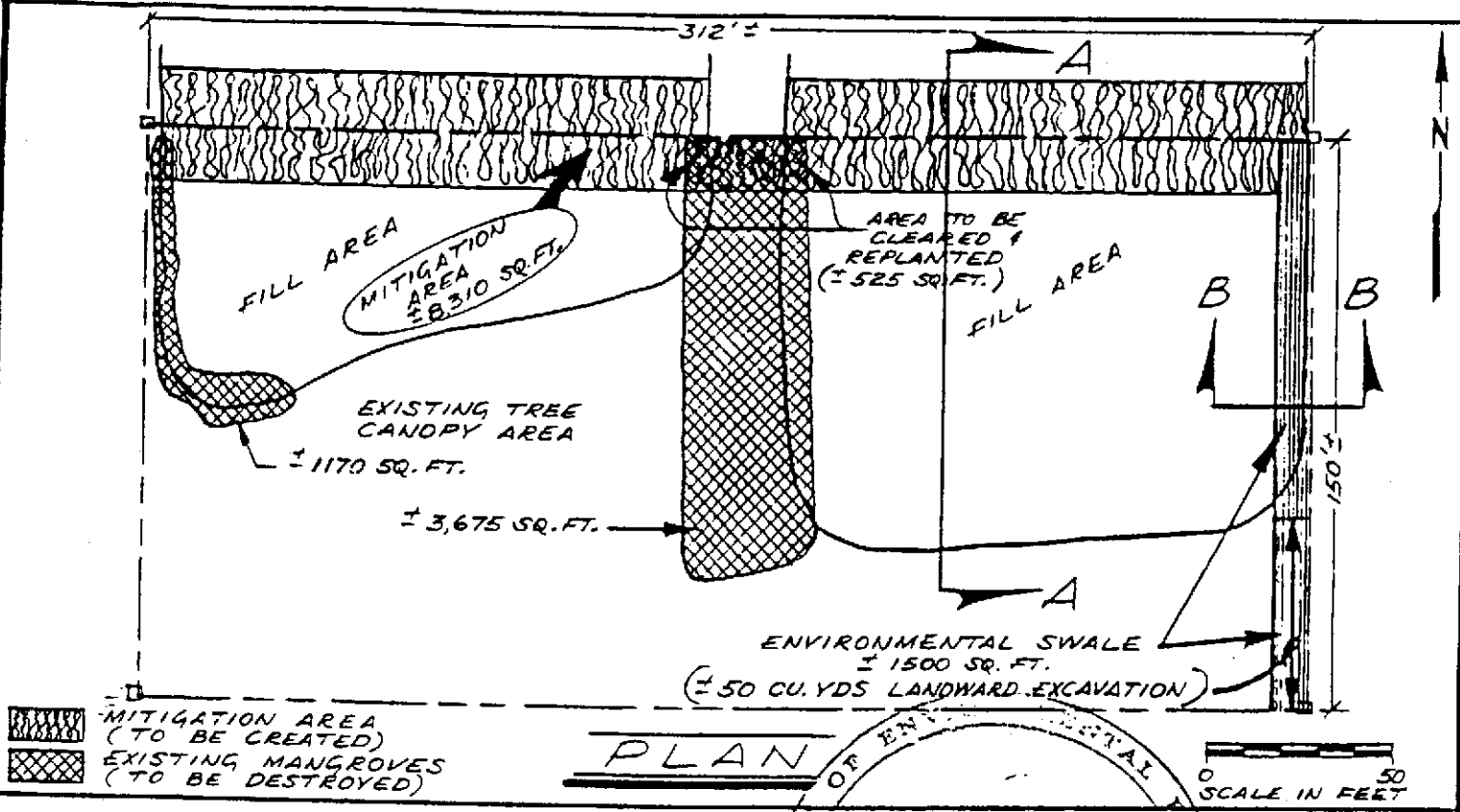
6. The planting area shall be monitored on a quarterly basis to determine the survivorship of the mangrove revegetation. A report shall be prepared during the first week of each quarter specifying the number of surviving plants in the revegetation area. These reports shall be submitted, within one week of monitoring, to Broward County Environmental Quality Control Board and the Department. This monitoring shall continue until the Department is reasonably assured of successful revegetation.

Issued this 17th day of December, 1986

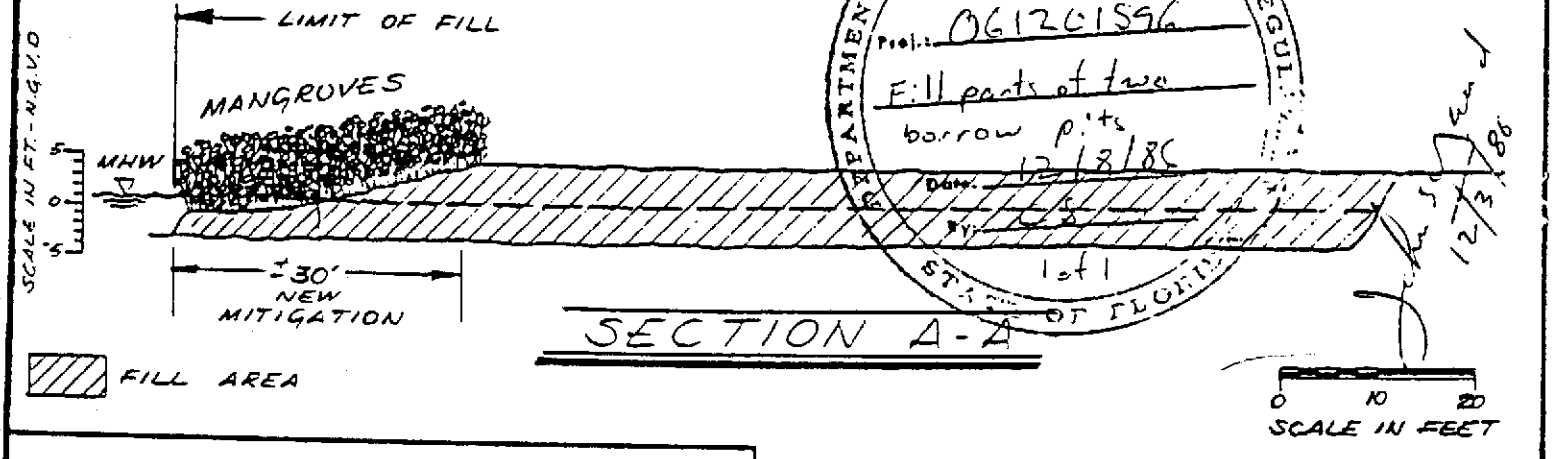
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

J. Scott Benyon
District Manager

DER Form 17-1.201(5)
Effective November 30, 1982

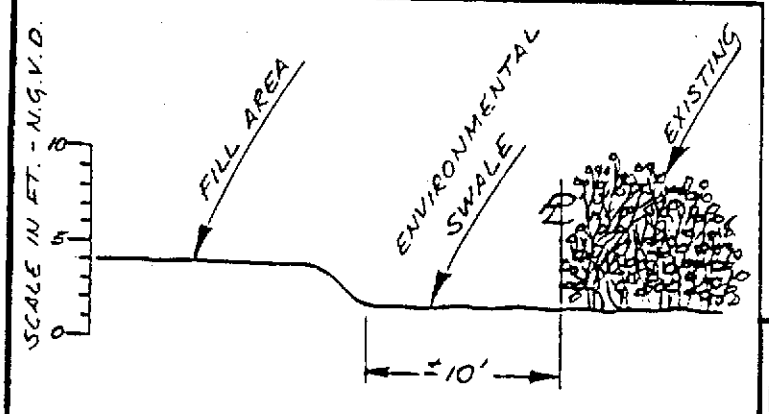


PLAN



SECTION A-A

DEPARTMENT OF ENVIRONMENTAL REGULATION
Proj.: 06126596
Fill parts of two borrow pits
Date: 12/8/86
By:
1 of 1
STATE OF FLORIDA



SECTION B-B

0 5 10
SCALE IN FEET

SUMMARY:

—MANGROVE AREA DESTROYED.....4845 SQ.FT.

—RED MANGROVE AREA CREATED...8310 SQ.FT.

—ENVIRONMENTAL SWALE..... 1500 SQ.FT.
(MANGROVE PROPAGATION AREA)

REV. 12/3/86 JTW

GEE & JENSON ENGINEERS-ARCHITECTS-PLANNERS, INC.
WEST PALM BEACH, FLORIDA

MITIGATION PLAN
999 ELLER DRIVE WAREHOUSE
DANIA, BROWARD COUNTY, FLORIDA
APPLICANT: JOHN E. BOZZUTO

DESIGNED	DRAWN	CHECKED	JOB NO.	DRAWING NO.
JTW	TCA	DJH	86-253	
DATE	SCALE	APPROVED	FILE NO.	SHEET / OF /
12-1-86	SHOWN			

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE	
To:	Loc/Tr:
To:	Loc/Tr:
To:	Loc/Tr:
From:	Date:

TO: Dr. Jeffrey Watts, DER Tallahassee

FROM: Chris Shea, D&F, DER West Palm Beach

RE: 999 Warehouse Partners Ltd.-File #061201596

DATE: October 6, 1986

I received the attached data on sediment analysis of two borrow pits the applicant wants to partially fill. The borrow pits are in the Port Everglades area of Broward County. Per our telephone conversation, I'd like to get your opinion on the necessity of EP toxicity tests and whether there is a threat to groundwater. You can reach me at SC 451-5005. Thanks for your attention.

State of Florida

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTROFFICE MEMORANDUM

TO: File

DATE: December 5, 1986

SUBJECT: Metal Analysis of Sediments

Dr. Geoffrey Watts agreed with Charles Duseph and Ron Lane that the metal concentrations of the borrow pit sediments (as determined by Environmental Services of South Florida for the applicant) are below toxic levels. Charles wanted to make sure that the Pb and Cr levels (70ppm and 27ppm respectively — 100ppm would be considered toxic) in the sediments were accurately reported and suggested I request an analysis of Pb and Cr levels in the sediment and water column, and an EP toxicity test for both metals, from Technical Assistance in Port St. Lucie. This request was sent to Terry Davis in early October. The samples have been taken but no analysis has yet been received. Ron Lane has informed me that this project as proposed presents no threat to groundwater.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTRROFFICE MEMORANDUM

TO: File DATE: 4-24-86

SUBJECT: Results of requested metals testing

Jerry Davis called me this morning and gave me the results of the requested metal testing on the borrow pit sediments and water column. The lead and chromium levels detected in the sediments were far below those reported by the applicant. Since those levels previously reported were not considered hazardous, this gives us further assurances that filling of the borrow pits will not result in suspension of high levels of metals. There are 2.8 micrograms/L Cr (2.8ppb) and 6.9 micrograms/L Pb (6.9ppb) in the water column. 50ppb for either of these metals would be considered a water quality violation. Terry is sending the results in the mail.

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD
500 S.W. 14th Court
Fort Lauderdale, Florida 33315
(305) 765-5881

RECEIVED
87 JAN 20 PM 1 31
FLA. DEPT. OF ENVIRON. REG.
WEST PALM BEACH

APPLICANT: 999 Warehouse Ltd. Partners
720 NW 36th St. Suite 105
Miami, FL. 33166

LICENSE NO. DF 87-1008
PROJECT: Lake Fill, Mitigation

This license is issued under the provisions of the Code of Regulations of the Broward County Environmental Quality Control Board hereinafter called the Code. The above named applicant, hereinafter called licensee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications, as submitted by applicant, and made a part hereof and specifically described as follows:

Place approximately 7,000 cubic yards of clean sand in two (2) adjacent borrow lakes to prepare site for warehouse expansion. Newly formed shorelines are to be revegetated with Red mangroves.

The project is located at 999 Eller Drive in Section 23, Twp 50 S, Rge 42 E, Dania.

Construction shall be in accordance with Application DER Form 17-1.203(1) dated 4-30-86, plans received on 10-7-86 and additional information received on 12-2-86 and 12-5-86.

License No. DF 87-1008

Applicant: 999 Warehouse Ltd. Partners

SPECIFIC CONDITIONS:

1) Notify BCEQCB a minimum of 48 hours before construction commences and a maximum of 48 hours after construction ends.

2) An 80% survival rate shall be achieved for the revegetated area over a period of three (3) years.

3) Quarterly monitoring of the revegetation area shall be done with reports submitted indicating the number of surviving plants, natural recruitment, apparent health and condition and any other information pertinent to the viability of the revegetated area.

Expiration Date: January 14, 1990

Issued this 14th day of January, 19 87

Broward County Environmental Quality Control Board.

VICTOR N. HOWARD, PE

POLLUTION CONTROL OFFICER

DEPARTMENT OF ENVIRONMENTAL REGULATION
PERMIT APPLICATION APPRAISAL

File No.: 06120596 County: Broward Date: 12/1/86

Applicant Name: 999 Warehouse Ltd Partners

Address: 7220 NW 36 St, Ste 105, Miami, FL 33166

Agent (if applicable): Gee & Jenson Eng - Arch - Planners, Inc.

Address: 2090 Palm Beach Lakes Blvd, West Palm Beach, FL 33402

Location of project: Section(s) 23 Township 50S Range 42E

Section(s) _____ Township _____ Range _____

Local Reference: _____

Water Body: Borrow Pits

Water Classification of Project Area: III Adjacent Waters: III

Aquatic Preserve: No

Outstanding Florida Waters: No

On site inspection by: Chris Shea

Date of Inspection: 6/13/86 Original Application: Yes ✓ No _____

Revised Application: Yes _____ No ✓ Date: _____ Date of 2nd Insp. 11/7

Biological and Water Quality Assessment

A. Description of proposed project and construction techniques. Quantify area of project which extends into waters of the state (including the submerged lands of those waters and the transitional zone of the submerged land) as defined in Section 17-4.02 and Section 17-4.28, Florida Administrative Code.

B. Biophysical features of general area. Include comments concerning extent of development of adjoining properties as well as relevant historical facts about the area.

C. Biophysical features of specific project site and spoil site if applicable. Include identification of bottom types and any relevant historical facts about the area of the project.

D. Potential impact of project on biological resources and water quality. Address long-term impact as well as immediate impact for all aspects of the project.

E. Suggestions, where appropriate, for modifications that may reduce or minimize the potential impact of project.

A. The applicant proposes to fill approximately 0.53 acres of two borrow pits in order to build a parking lot for an existing warehouse at 999 Eller Dr., Dania, Broward County. Approximately 7,000 cyd. of clean sand is to be placed in the two pits. The original application was modified to reduce the amount of fill and thereby leave a large stand of white mangroves on the eastern edge of the borrow pits alone. In addition, a 10 ft. by 150 ft. environmental swale will be built on the eastern edge of the fill. This swale will be at the same elevation as the existing forest in order to facilitate flushing. The swale will not be maintained and should be colonized by white mangroves. The fill will entail the destruction of approximately 4,845 sq. ft. (.11 acres) of white mangroves along the southern and western shores of the borrow pits. To mitigate for this destruction, the applicant proposes to create a 30 ft. by 312 ft. mitigation area on the northern edge of the fill area. This mitigation area will be planted with red mangrove seedlings, providing approximately 8,310 sq. ft. (.19 acres) of created wetland. In addition 525 sq. ft. (.01 acre) of white mangroves will be temporarily disturbed (i.e. the area will be cleared and then replanted) by construction activity.

B. The project site is in the Port Everglades area of Broward County, an industrial area with few remaining natural areas. The borrow pits to be partially filled are jurisdictional, they link up to a larger borrow pit to the north which belongs to Clifford and Betty Berry. This larger borrow pit is linked through ditches to the FP&L outfall canal and from there to the Intracoastal Waterway. The Berry property is a suspected hazardous waste site. A dredge and fill application for the Berry property was the subject of an administrative hearing. The recommended order of the hearing officer was to issue the permit.

C. Water in the borrow pit is clear and dark. There is no aquatic vegetation visible in the pits, except for some algae. According to Gee & Jenson (the agents), water in the pits is relatively shallow (4-6 ft.)

The south side of the borrow pits is vegetated by brazilian pepper (Schinus terebinthifolius), saltbush (Baccharis sp.) and other weedy plants. The west bank of the westernmost borrow pit is vegetated by a mixture of pepper, saltbush and a few white mangroves (Laguncularia racemosa). There is a berm separating the two borrow pits which is almost entirely vegetated by white mangroves. The eastern shore of the easternmost borrow pit is also vegetated by a thick stand of

white mangroves. The permit application has been modified so as not to affect this area. There is a mature (between 25-30 ft. tall) white mangrove forest on the northern edge of the borrow pits. This area will not be impacted by the proposed construction.

D. Since this area is connected hydrologically to a possible source of hazardous waste contamination (the Berry site), any activity which disturbs the sediments is a matter of concern. Analysis of sediment samples taken from the two borrow pits, however, revealed no contamination of heavy metals, pesticides or purgeables (see attached). All pesticides and purgeables tested for were below detectable limits. Heavy metal concentrations were not high enough to cause toxicity problems.

The white mangroves to be destroyed are healthy and productive; they provide good habitat for a variety of organisms. The mitigation plan submitted (approximately .2 acres of mangroves created vs. approximately .1 acre destroyed) should help offset the habitat destruction which this project will entail.

E. Turbidity screens should be deployed during construction. The permitee should commit to survival of planted mangroves. Clean fill should be used in filling the pits.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
BRANCH OFFICE
2745 SOUTHEAST MORNINGSIDE BOULEVARD
PORT ST. LUCIE, FLORIDA 33452

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

FIELD NOTES GRAB SAMPLING

PROJECT NAME 999 Warehouse

DATE SAMPLED 861021 BY W. Thiel / M. Lubie

SAMPLE LOCATION 25' north of south edge of canal in middle

SITE I.D. 999-M (H.O) 999-MS (SEDIMENT)

TIME 0940

TEMPERATURE

pH

CONDUCTIVITY

COMMENTS SEDIMENT SAMPLE AS A COMPOSITE OF 2 GRABS @ 1 POINT

APPROX. DEPTH: 9'

Protecting Florida and Your Quality of Life

'86 DEC 15 AM 11 15

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTH FLORIDA DISTRICT - PORT ST. LUCIE
LABORATORY

FLA. DEPARTMENT OF ENVIRONMENTAL REG.
WEST PALM BEACH

STORET STATION #	DATE SAMPLED (Y/M/D)	SAMPLE TIME	DEPTH (ft)
	861021	0940	9

REMARKS
Blank contained 1 ug/L Pb.

SAMPLE LOCATION, SOURCE & FIELD ID
999 Warehouse Ltd. Partners
SEDIMENT
999-MS

	WATER			SEDIMENT			TISSUE		
METALS	UNIT	STORET CODE	VALUE	UNIT	STORET CODE	VALUE	UNIT	STORET CODE	VALUE
Aluminum	ug/L	01105		mg/Kg	01108				
Arsenic	ug/L	01002		mg/Kg	01003		mg/Kg	01004	
Cadmium	ug/L	01027		mg/Kg	01028		mg/Kg	71940	
Calcium	mg/L	00916		mg/Kg	00917				
Chromium	ug/L	01034	25U	mg/Kg	01029	2.8	mg/Kg	71939	
Copper	ug/L	01042		mg/Kg	01043		mg/Kg	71937	
Iron	ug/L	01045		mg/Kg	01170				
Lead	ug/L	01051	6.9	mg/Kg	01052	0.6	mg/Kg	71936	
Magnesium	mg/L	00927		mg/Kg	00924		———	———	
Manganese	ug/L	01055		mg/Kg	01053		———	———	
Mercury	ug/L	71900		mg/Kg	71921		mg/Kg	71930	
Nickel	ug/L	01067		mg/Kg	01068		mg/Kg	01069	
Potassium	mg/L	00937		mg/Kg	00938		———	———	
Selenium	ug/L	01147		mg/Kg	01148		mg/Kg	01149	
Silver	ug/L	01077		mg/Kg	01078		———	———	
Sodium	mg/L	00929		mg/Kg	00934		———	———	
Tin	ug/L	01102		mg/Kg	01103		———	———	
Vanadium	ug/L	01087		mg/Kg	01088		———	———	
Zinc	ug/L	01092		mg/Kg	01093		mg/Kg	71938	
STORET FIELD SAMPLE#									
AGENCY COLLECTING									
AGENCY ANALYZING		8051							

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value give.
U - Material was analyzed for but not detected.
The number is the Minimum Determined Limit.

ANALYST D. H 861210

LAB REPORT VERIFIED BY

Environmental Services of South Florida, Inc.

P.O Box 10003 • Riviera Beach, Florida 33404 • (305) 848-7805

DHRS LAB #86117

LABORATORY ANALYSIS

CONSULTING

INDUSTRIAL / AGRICULTURAL / DOMESTIC

WATER / WASTEWATER / SOIL / FOOD

August 13, 1986

Ms. Janette Wojciak
Gee and Jenson Engineers-
Architects-Planners, Inc.
2090 Palm Beach Lakes Boulevard
West Palm Beach, Florida 33409

RE: Sediment Analysis
999 Eller Drive, Warehouse Pits
Dania, Broward County, Florida

Results of chemical analysis of sediment samples collected at 999 Eller Drive Warehouse on July 15, 1986, are as follows:

Parameter	Sample Point #3	Sample Point #7
Moisture, (%)	36.2	32.4
Lead, Pb	64.4	76.5
Total Chromium, Cr	25.2	29.6
Cadmium, Cd	1.20	0.417
Mercury, Hg	0.024	0.016
Arsenic, As	3.84	3.21
Selenium, Se	0.083	0.098
Barium, Ba	<1.0	<1.0
Aluminum, Al	788	652
Pesticides and PCB's	SEE ATTACHED SHEETS	
Purgeables (EPA 601 & 602)	SEE ATTACHED SHEETS	

NOTES: -Results, unless otherwise specified, expressed in mg/kg dry weight sediment
-Samples were collected utilizing a 15 by 15 cm Ekman grab sampler, which was particularly applicable due to the physical nature of the sediments and the lack of water current. Five grabs were taken from each station and composited on site in glass bottles. These were then iced down and delivered to laboratory for consequent analyses.

We appreciate the opportunity to serve you.

Michael A. Fiedor

Michael A. Fiedor, Director

HAINES TESTING LABORATORY, INC.

U.S. 19 & ULMERTON ROAD
CLEARWATER, FLORIDA 33520

TELEPHONE (813) 531-5731

REPORT NO. 62398 July 25, 1986

FOR: ENVIRONMENTAL SERVICES
P.O.Box 10003
Riviera Beach, FL 33404
Attn: Mike Fiedor

HAINES TESTING LABORATORY, Inc.

W.E. Haines, Ph.D.

ANALYSIS:

Pesticides/PCB's Scan

SAMPLE MARKINGS:

Sludge samples received 7-17-86, #999, #1000.

LABORATORY FINDINGS

	MICROGRAMS PER KILOGRAM (Dry Weight Basis)		
	Reported Values		Detection Limit
	#999	#1000	
ALDRIN	BDL	BDL	1
CAPTAN	BDL	BDL	10
CHLORDANE	BDL	BDL	20
DDD	BDL	BDL	2
BHC (alpha)	BDL	BDL	2
DDE	BDL	BDL	1
DDT	BDL	BDL	2
DEMETON	BDL	BDL	200
DIELDRIN	BDL	BDL	1
BHC (beta)	BDL	BDL	2
DURSBAN	BDL	BDL	1
ENDOSULFAN I	BDL	BDL	2
ENDRIN	BDL	BDL	10
GUTHION	BDL	BDL	200
DICHLORAN	BDL	BDL	2
HEPTACHLOR	BDL	BDL	1
HEPTACHLOREPOXIDE	BDL	BDL	1
LINDANE	BDL	BDL	1
MALATHION	BDL	BDL	50
TRIFLURAN	BDL	BDL	10
ENDOSULFAN II	BDL	BDL	50
MIREX	BDL	BDL	1
METHOXYCHLOR	BDL	BDL	20
PARATHION	BDL	BDL	10
ENDRIN ALDEHYDE	BDL	BDL	10
RONNEL	BDL	BDL	10
STROBANE	BDL	BDL	50
TOXAPHENE	BDL	BDL	100
METHYL PARATHION	BDL	BDL	30
PCB-1016	BDL	BDL	10
PCB-1221	BDL	BDL	100
PCB-1232	BDL	BDL	10
PCB-1242	BDL	BDL	10
PCB-1248	BDL	BDL	10
PCB-1254	BDL	BDL	10
PCB-1260	BDL	BDL	10
PCB-1262	BDL	BDL	10

WADSWORTH/ALERT LABORATORIES, INC.

COMPOUND LIST - VOLATILE ORGANICS

Client: Environmental Services of South Florida
Sample I.D.: 1000
W/AL Sample I.D.: 6G10-2
Receiving Date: 7/17/86
Matrix: Sediment
Completion Date: 7/25/86

COMPOUND	RESULT
Acrolein	ND
Acrylonitrile	ND
Benzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
t-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
c-1,2-Dichloropropene	ND
t-1,3-Dichloropropene	ND
Ethylbenzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND
1,2 Dichlorobenzene	ND
1,3 Dichlorobenzene	ND
1,4 Dichlorobenzene	ND
1,2 Dibromo-3-chloropropane	ND
Xylenes	ND

Note: ND (None detected, lower detectable limit = 1 mg/Kg)

WADSWORTH/ALERT LABORATORIES, INC.

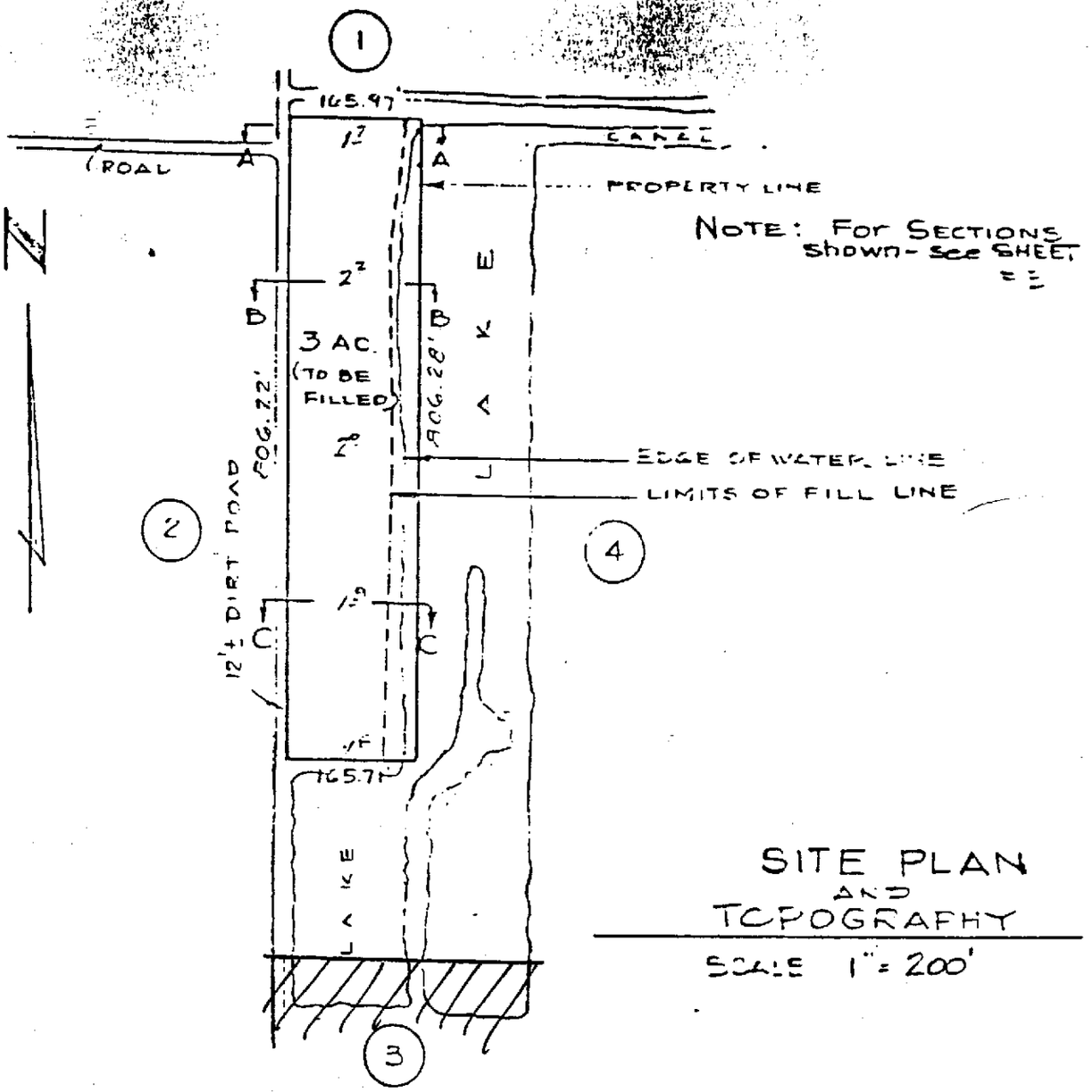
COMPOUND LIST - VOLATILE ORGANICS

Client: Environmental Services of South Floride
Sample I.D.: 999
W/AL Sample I.D.: 6G10-1
Receiving Date: 7/17/86
Matrix: Sediment
Completion Date: 7/25/86

COMPOUND	RESULT
Acrolein	ND
Acrylonitrile	ND
Benzene	ND
Bromochloromethane	ND
Bromodichloromethane	ND
Bromoform	ND
Bromomethane	ND
Carbon Tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane	ND
Dibromochloromethane	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
t-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
c-1,2-Dichloropropene	ND
t-1,3-Dichloropropene	ND
Ethylbenzene	ND
Methylene chloride	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
Toluene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane	ND
Vinyl Chloride	ND
1,2 Dichlorobenzene	ND
1,3 Dichlorobenzene	ND
1,4 Dichlorobenzene	ND
1,2 Dibromo-3-chloropropane	ND
Xylenes	ND

Note: ND (None detected, lower detectable limit = 1 mg/Kg)

BERRY NURSERY
IN
SECTION 23, TWP 50 S. RGE. 42 E.



SITE PLAN AND TOPOGRAPHY

SCALE 1" = 200'

PURPOSE: PROPOSED NURSERY DEV.
DATUM MEAN SEA LEVEL
ADJACENT PROPERTY OWNERS:
① AMOCO
② [illegible]
③ WILLIAM LEONARD
④ [illegible]

IN SEC 23-50S, 42E.
AT PORT EVERGLADES
COUNTY OF BROWARD STATE FLORIDA
APPLICATION BY CLIFF BERRY, INC

Rev 1/31/83

SHEET 2 OF 3 DATE NOV. 82

Amoco Corporation
200 East Randolph Drive
Chicago, Illinois 60601
Environmental Affairs & Safety Department

November 25, 1987

Mr. Victor Howard, P.E.
Pollution Control Officer
Broward County Environmental Quality Control Board
500 S.W. 14th Court
Ft. Lauderdale, FL 33315

Dear Mr. Howard:

In response to your October 13, 1987, correspondence, we have conducted additional sampling and analysis of soils from the drainfield at the 1000 S.E. 28 Street site. A copy of the raw data from ESE is attached.

As you can see, none of the samples exceeded the USEPA PCB standard of 25 ppm (April 2, 1987, Federal Register, page 10709). Accordingly, we plan to excavate the drainfield material along with other contaminated soils from Area G and place it in the treatment area on the southern half of the site. If you have any questions regarding the data, please call me at (312) 856-3618.

Sincerely,

Ralph C. Feeney

Ralph C. Feeney

RCF/kmt

Attachment

bcc: Dr. Harvey Schneider, Broward County EQCB
R. G. Farmer, Mail Code 1401
J. Walker, Mail Code 1401
J. D. Pickett, Mail Code 2103
J. Peterson, Enviropact

ENVIRONMENTAL
QUALITY CONTROL BOARD
87 DEC -2 PM 2:12

M/C 4902

ENVIRONMENTAL SCIENCE & ENGINEERING 11/23/87 STATUS: FINAL PAGE# 1

PROJECT NUMBER 87404V0216 PROJECT NAME AMOCO PT.EVERGLADE
FIELD GROUP AMOCS5 LAB COORDINATOR J.D. SHAMIS

RESULTS OF ANALYSIS

STORET CODE:					70320	39514	39491	39495	39499	39503	39507	39511	
METHOD CODE:					1	EC	EC	EC	EC	EC	EC	EC	
PARAMETER:					MOIST.	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	
UNITS:					%WET WT	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	UG/KG-DRY	
FLD.GRP.	#	SAMPLE ID	DATE	TIME									
AMOCS5	1	DT#1	10/29/87	11:05	19.1	<25.1	<25	<25	<25	<25	390	<25	Trend #1
AMOCS5	3	DT#3	10/29/87	11:15	28.3	<56.4	<56	<56	<56	<56	73	<56	Trend #1
AMOCS5	4	DT#4	10/29/87	13:00	14.3	<23.9	<24	<24	<24	<24	<24	<24	
AMOCS5	5	DT#5	10/29/87	13:10	12.7	<23.6	<24	<24	<24	<24	27	<24	Trend #3
AMOCS5	6	DT#6	10/29/87	13:15	38.0	<33.2	<33	<33	<33	<33	500	<33	Trend #3
AMOCS5	7	DT#7	10/29/87	14:00	13.5	<238	<240	<240	<240	<240	900	<240	
AMOCS5	9	DT#9	10/29/87	14:06	5.4	<7.18	<7	<7	<7	<7	53	<7	Trend #2
AMOCS5	10	DT#10	10/29/87	14:30	4.8	<16.3	<16	<16	<16	<16	22	<16	Trend #2

Ralph Feeney

TO: Ralph feeney
FROM: Steve Denaham
PAGES: ONE
DATE 11/23/87

NOV 24 '87 09:28

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

500 S.W. 14th Court
Fort Lauderdale, Florida 33315
(305) 765-5881

October 13, 1987

RECEIVED
OCT 23 1987
Dept. of Environmental Reg.
West Palm Beach

Mr. J. D. Pickett
Amoco Corporation
200 E. Randolph Drive
Chicago, IL 60601

Reference: Remedial Action Plan Phases I, II and III and Water Quality Data for the Amoco site at 1000 SE 28 St., Ft. Lauderdale, Florida

Dear Mr. Pickett:

A review of the reports recently prepared by Environmental Science and Engineering, Inc. and Enviropact, Inc. has been performed. This review was followed by a telephone conversation with DER representative Ron Lane. Based on EQCB's and DER's review, the Remedial Action Plan is approved conditional upon the following conditions.

1) The western drainfield contains measurable levels of PCBs. Further work will be needed to identify the extent of PCB contaminated soils in the drainfield prior to excavation of the drainfield. Once defined, the PCB contaminated soil must be removed and disposed at an approved site. The remaining drainfield soils may be treated on-site as proposed.

2) If petroleum product is encountered during the excavation this waste must be removed and properly disposed. If any other materials or structures are uncovered during excavation then notify this office immediately.

3) The contaminated soil treatment and storage area should be bermed at all times to prevent leachate movement. EQCB should be notified 48 hours before soil excavation is initiated so that we can conduct site inspections during the cleanup.

4) As a post closure evaluation monitoring wells 4 and 9 should be sampled quarterly for EPA Methods 602 and 610. Construction should not block access to these wells or destroy them.

5) The closure activities performed must be recorded on the deed of this property and a copy of that record sent to EQCB. A draft of the recordation should be sent to EQCB for approval. This recordation should include a statement concerning the presence of contaminated soil left on the site.

6) Quarterly reports should be submitted to EQCB. The contents of these reports should include the current activities at the site, monitoring well samples, quantity of contaminated soil on site, quantity of contaminated soil that has been treated and cleaned.

At the termination of soil remediation a final report will be submitted to EQCB and we will conduct a final site inspection. Please provide waste manifests for all wastes removed during these activities.

If any questions arise, or if any clarification on the above is necessary, please contact Dr. Harvey Schneider.

Sincerely,

Victor N Howard

VICTOR N. HOWARD, P.E.
POLLUTION CONTROL OFFICER

cc: J.S. Benyon (DER/WPB)
~~Ron Lane (DER/WPB)~~
Ralph Feeney (Amoco, Chicago)
Cliff Berry
Richard A. Pettigrew (Morgan, Lewis & Bockius)

VNH/HS/sc
w3/ltrAmoco8

RON LANE
DER/WPB

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

500 S.W. 14th Court
Fort Lauderdale, Florida 33315
(305) 765-5881

March 9, 1987

RECEIVED
MAY 22 1987
Dept. of Environmental Reg.
West Palm Beach

Mr. Cliff Berry
Cliff Berry, Inc.
P.O. Box 13079
Port Everglades
Ft. Lauderdale, FL 33316

Dear Mr. Berry:

A review of the Cliff Berry site in Port Everglades indicates that we are ready to proceed with phase I of the Remedial Action Plan. Phase I should deal with a definition of the extent of vertical soil and water contamination. This study should address the following questions:

1. What is the history of this site? Describe episodes of contaminant introduction to the site. Support the discussion with aerial photographs. Where are the gravel drainfields and other excavations located? Discuss the dimensions of these excavations. The consultant should discuss the feasibility of using geophysical techniques to define the excavated areas.

2. Define the interface of the groundwater with adjacent surface water bodies.

3. Supply an inventory of all wells within a one-mile radius from the site.

4. Provide estimates of vertical and horizontal permeability.

5. Determine the rate of groundwater flow.

6. Describe a plan in which background levels will be established for soil and groundwater cleanup. The locations of the samples to be collected for defining water and soil background levels must be approved by EQCB prior to collection.

7. A summary of all EP Toxicity data collected at the site should be submitted. Discuss the feasibility of additional sampling for EP Toxicity.

8. A summary of PCB data collected at the site should be submitted. Discuss the feasibility of additional sampling for PCB's. A site specific QAPP addressing the sampling and analysis of PCB's should be forwarded.

9. A summary of detergents (MBAS) data collected at the site should be submitted. Discuss the feasibility of additional sampling for MBAS.

10. Discuss the sources of barium, PCB's and detergents (MBAS) at the site.

11. The well completion reports for monitor wells #7 - #12 should be submitted on individual forms.

12. Soil profile data from all monitor wells and descriptions of the stratigraphy of the trenches should be submitted.

13. Monitor wells #2 and #3 should be repaired and sampled to provide the information from these wells which was excluded from the Contamination Assessment Report.

14. A site inspection revealed that several monitor well caps were broken. All monitor wells must be properly maintained.

15. A map is attached. The map shows the locations of eighteen recommended borings (minimum 20' deep) and two recommended monitor wells. The borings should evaluate vertical extent of contamination. Therefore, the deepest sample in each boring should show absence of contamination. Safeguards to protect against spreading contamination vertically and against collecting unrepresentative samples should be addressed. The monitor wells should be constructed to the same depth as previous wells. The screen should extend from two feet above the water table to five feet below the base of the clay layer. Your response should include your plan for evaluating vertical soil contamination and the monitoring of groundwater in the vicinity of TB-2 and TB-4.

If any questions should arise, please contact Harvey Schneider.

The information requested should be forwarded to EQCB no later than April ~~15~~ 30, 1987.

We look forward to receiving and reviewing this information so that we can proceed with phase II, specific actions to address the remediation of the water and soil contamination.

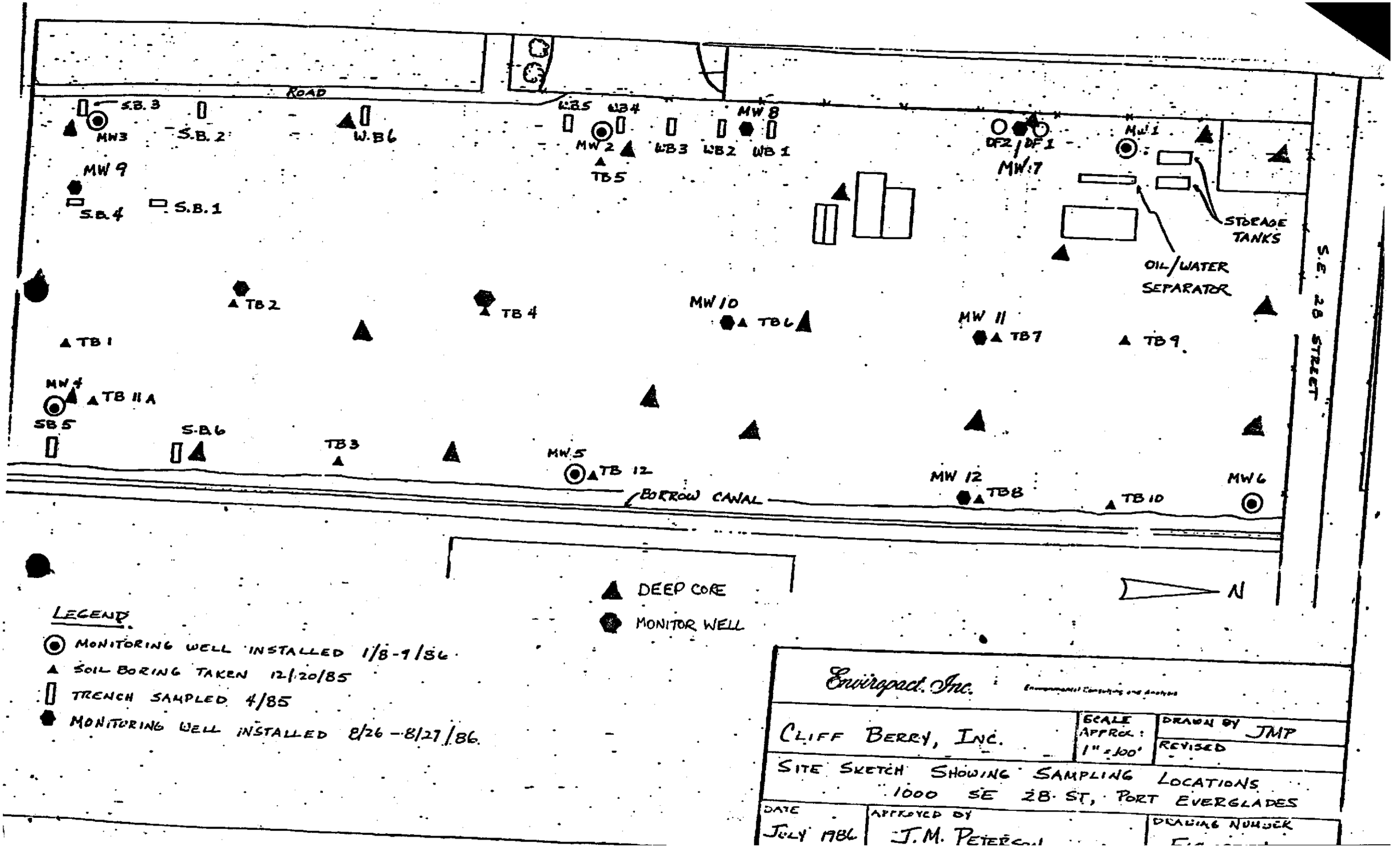
Sincerely,

Victor N. Howard

VICTOR N. HOWARD, P.E.
POLLUTION CONTROL OFFICER

cc: J.S. Benyon (DER/WPB)
Janet Peterson (Enviropact)
J.D. Pickett (Amoco Oil Co.)
J.E. Brenman (Consultant Engineer)

VNH/HS/sc
W3/ltrCBerry3



Enviropact Inc.

CLIFF BERRY, INC.	SCALE APPROX: 1" = 100'	DRAWN BY JMP
		REVISED

SITE SKETCH SHOWING SAMPLING LOCATIONS
1000 SE 28 ST, PORT EVERGLADES

DATE	APPROVED BY	DRAWING NUMBER
JULY 1986	J.M. PETERSON	

ETING ATTENDANCE

DATE 2/10/87

COMPANIES Cliff Berry

AGENCIES EQCR

NAME	REPRESENTING	TELEPHONE NO.
Madeline W.	EQCR	765-5881
James C. Walker	Amoco Oil Co	(312) 856-4920
Miguel Hernandez	Amoco Oil Co	523-0571
J.E. Brenman, P.E.	Amoco Oil Co.	(305) 752-7117
J.D. Pickett	Amoco	312-856-7463
RG FARMER	Amoco OIL	312-856-3915
Janet Peterson	Enviropact, Inc.	(305)-620-1700
Richard Pettigrew	for Cliff Berry, Inc. Morgan, Lewis & Bockius	305-579-0360
Ara [illegible]	EQCB	305-765-5881
John [illegible]	atty for Cliff Berry	305-992-1199
Ron Lane	DER-Groundwater	305-689-5800
Donna Rodman	DER - Enforcement	305-689-5800
HARVEY SCHNEIDER	EQCB - HYDROLOGY	305-765-5881
Fran Henderson	EQCB	"

attendance

File Copy

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
1900 SOUTH CONGRESS AVENUE
WEST PALM BEACH, FLORIDA 33406

JUN 15 1987

BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
J. SCOTT BENYON
DISTRICT MANAGER

Mr. Harvey Schneider
Broward County Environmental Quality
Control Board
500 SW 14th Court
Fort Lauderdale, Florida 33315

RE: Cliff Berry/Amoco Meeting 6/4/87

Dear Harvey:

I just wanted to convey to you the Departments feeling towards the proposed tank farm project at the Cliff Berry site.

Although no proposals, correspondence, or maps were submitted at the meeting, Amoco plans to begin excavation (total of about 28,000 cubic yards) by mid-July.

The study (performed by ESE) did not address (or analyze for) groundwater contamination. The soils data, presented in the study, indicate substantially high levels of polynuclear aromatic hydrocarbons (PAH's) as well as some VOC's, PCB's & metals. Considering the fact that excavation (for the two proposed storage tanks) is to be well below the static water table elevation and that an impermeable liner system is to be installed, the Department has concerns about the diversion of natural groundwater flow once this liner is in place, how the groundwater will be diverted during excavation, and what effect the excavation and liner system will have on a groundwater recovery and treatment system should one be deemed necessary?

It is important to note that if contaminated groundwater is withdrawn and then discharged to an unlined section of the site (to better facilitate excavation of the soils), the responsible parties may be in violation of FAC Ch. 17-3 and F.S. 376.

The excavated soils are to be stockpiled (on some kind of liner) at the southern end of the site to facilitate bio-reclamation of the soils. There could be numerous problems with this, and a very detailed feasibility study would need to be submitted.

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)	Initial / Date
Cliff Berry, Inc	
2. Norma Knox	Initial / Date
3.	Initial / Date
4.	Initial / Date

REMARKS:

At your request:

1) EPA Form 8700-12 "Notification of hazardous waste activity"

2) EPA Form 530-SW 010

For additional information regarding waste oil Contact used/waste oil Coordinator.

904/488-0300 (Tallahassee)

INFORMATION	
	Review & Return
	Review & File
	Initial & Forward

DISPOSITION	
	Review & Respond
	Prepare Response
	For My Signature
	For Your Signature
	Let's Discuss
	Set Up Meeting
	Investigate & Report
	Initial & Forward
	Distribute
	Concurrence
	For Processing
	Initial & Return

FROM:

P. Wierzbicki, SEFD

DATE 3-25-86

PHONE 305/689-5800

d. m. ambrose associates, inc.
consulting engineers - land surveyors

Nichols
DePojar
Regan

June 11, 1985

Mr. Charlie Pemble
S.F.W.M.D.
P.O. BOX V
West Palm Beach, FL

RE: BERRY WAREHOUSES
JOB NO.: 82-247
YOUR FILE NO.: 01095-D

Dear Mr. Pemble:

Pursuant to our conversation and your request of this date, please be advised that we seek to waive the review deadline for your processing of the surface water management permit for the above referenced project.

We appreciate that you have recently located test data of the lake water column and bottom sediments that would indicate unacceptable pollutant levels. This situation is now to receive further scrutiny by both your office and the D.E.R. before permits can be issued.

With the resolution of this matter, your timely consideration of what we previously understood to be the proper resolution for the surface water management system on this site would be appreciated.

Very truly yours,
D.M. AMBROSE ASSOCIATES, INC.

Garth Hinckle, Jr.

RECEIVED
JUN 12 1985
REGIONAL CONTROL DEPARTMENT

CC: Mike Ambrose
Cliff Berry
Robert J. Compton

GHJ/mdh

6190 North Federal Highway, Boca Raton, Florida 33431 (305) 997-6790
West Palm Beach 655-6151, Broward 462-2860

Nichols

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT

P.O. BOX 3858
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33402-3858

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ROY M. DUKE
DISTRICT MANAGER

July 2, 1985

Mr. Mike Ambrose
D. M. Ambrose Associates, Inc.
6190 N. Federal
Boca Raton, Florida 33431

Dear Mr. Ambrose:

RE: Berry Nursery

Reviewing the sampling assay data submitted some time ago by Mr. E. F. Corcoran, we find that the analytical methods and levels of detection are inconsistent with EPA guidelines. In other words, applying the numerical values derived from the method used to the published detection limits, indicates violations of State of Florida water standards.

We intend to sample and run a total scan for halogenated pesticides, total PCBs, EPA series 601 and 602, and EPA toxic metals. Survey of the site will determine appropriate sampling points to sample soil, surface and ground water, and sediments.

If your client desires split sampling, it can be done. Based on the analytical results then becoming available, we will determine whether or not the site is presently permittable. We will do our best to expedite this decision process.

Sincerely,

Donald B. White

Donald B. White, P.E.
Permitting Section Head

DBW:my:38

cc: Roy Duke
Julia Cobb
Terry Davis
Larry O'Donnell
Charles Ouseph
Robert J. Compton

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

500 S.W. 14th Court
Fort Lauderdale, Florida 33315
(305) 765-5881

March 19, 1986

Mr. Cliff Berry
Cliff Berry, Inc.
PO Box 13079
Port Everglades
Ft. Lauderdale, FL 33316

Subject: Submittal of Contaminant Assessment Report (CAR) and Recommendations for Remedial Actions, at 1000 SE 28 Street facility, Port Everglades, Florida

Dear Mr. Berry:

On 2/7/86, BCEQCB received the above submittal titled "Report for Continued site Investigation and Recommendations for Remedial Action", dated 1/31/86, prepared by Enviropact, Inc. Copies of the final submittal have been distributed to FDER and Amoco Oil for review and comment.

Staff feels that scheduling a cooperative final review meeting will expedite the comment and response period necessary for regulatory review of the subject submittal. A tentative date of 4/16/86 at 2 PM at the office of BCEQCB has been scheduled. Please contact our staff hydrogeologist, Mr. T. A. Lawrence, if further details are necessary.

Sincerely,

Victor N Howard

VICTOR N. HOWARD, P.E.
POLLUTION CONTROL OFFICER

cc: A. Pavda (DER/WPB)
T. Gogle (Amoco)
J. Tostanoski (Enviropact)
T. Zinn (attorney C. Berry)
Dr. Dean (DER/Tall.)
TAL/VNH/sc
T3/ltrClfBry9

FILE COPY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA
DISTRICT

P.O. BOX 3858
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33402-3858

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ROY M. DUKE
DISTRICT MANAGER

March 25, 1986

Mr. Terry Lawrence
Broward County Environmental
Quality Control Board
500 S.W. 14 Court
Ft. Lauderdale, Florida 33315

Dear Mr. Lawrence:

RE: C.A.R. and Recommendations for Remedial Action/Cliff Berry, Inc. Site Closure

I have reviewed the above referenced material submitted by Enviropact, Inc., and in view of the data presented, find the Contamination Assessment Report ("CAR") incomplete and inadequate.

The following incompleteness items are provided for your information.

(1) Pursuant to paragraph 1.A., for Corrective Action for Groundwater Contamination Cases, the following objectives of the C.A.P. have not been met.

1. The areal and vertical extent of soil and groundwater contamination has not been adequately defined. The PCB contamination in drainfields 1 & 2, has not been delineated on any site map. Secondly, soil borings TB-2, TB-3 and TB-4, all show elevated levels of Benzene at the 15 foot depth (at 23.0 ppm, 13.1 ppm, and 17.8 ppm respectively). This is well below the soil/water interface, and in a completely saturated zone. However, no sandpoint or monitoring wells were installed in (or near) any of these borings to determine the concentrations of Benzene and/or other 601 & 602 compounds in the groundwater at these locations.

2. Sources of the various contaminants have not been determined. Additionally, the rate and direction of groundwater flow has not been submitted with the C.A.R.

3. In review of the data submitted with the C.A.R., no contaminant plumes have been delineated. Although Barium has been found in virtually every test boring (in concentrations from 23 ppm to 1,190 ppm) both in the unsaturated and saturated soil zones, no groundwater samples have been analyzed for Barium.

4. The only groundwater violation reported in the C.A.R. has been for phenols, but no interim remedial measures, other than monitoring, have been proposed to remedy the situation.

(2) Pursuant to paragraph 1B, pertaining to the tasks the C.A.P. shall contain, the following items of incompleteness are noted.

1. No groundwater flow directions have been submitted to show local flow paths.

2. Placement of monitoring wells along the perimeter of the property does not adequately trace the extent of groundwater contamination.

3. No sandpoint or monitoring wells have been sampled in the vicinity of drainfields 1 and 2 to determine the extent of PCB's in the groundwater. The proposed well locations submitted in a May 11, 1984 letter to John Guidry/D.E.R., do not appear in the C.A.R. submitted March 7, 1986.

4. Locations of any private (or public) potable supply wells within a 1 mile radius of the site need to be delineated and, if present, their locations submitted on a site map.

(3) Pursuant to paragraph 1C, and adequate QA/QC Plan has not been submitted. The QA/Qc Plan shall be prepared in accordance with the requirements set forth in the document titled "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, QAMS-005/80, December, 1980" prepared for the U.S. E.P.A.

COMMENTS/RECOMMEDATIONS

(1) Due to the extent and type of contamination at this site in proximity to the existing lakes in the immediate vicinity, a groundwater monitoring plan should be implemented. This plan should include, but not be limited to the following criteria.

(a) Location of existing or proposed monitoring well(s) to sample natural, background water quality.

(b) Location of intermediate and compliance wells in the downgradient direction.
(c) Construction details of the monitoring wells (existing and proposed).
(d) Hydrogeological, physical and chemical data for the site including:
1. Direction and rate of groundwater flow.
2. Vertical permeability of confining bed(s).
3. Cones of depressions, water supply wells and monitoring wells located within a 1 mile radius of the site.

(2) Additional groundwater data is needed in several areas to better define the extent of contamination.

(a) Analyze for 601 and 602 compounds and Barium by installing wells at locations TB-2, TB-3 and TB-4 in addition to the six monitoring wells previously sampled.
(b) Analyze for PCBs by installing a well(s) at or near TB-6 and in the vicinity of drainfields 1 and 2. Detection limits for PCB's in groundwater should be less than 1 ppb.

(3) Additional data is needed concerning the recommended excavation/reclamation plan. Specific items of concern include:

(a) A QA/QC Plan for the sampling and analysis of PCB's in the soil, surface waters and groundwaters in the drainfield vincinity.
(b) Will dewatering be necessary prior to excavation of the drainfields?
(c) How will PCB contaminated soil and water be treated and/or disposed?
(d) How will infiltration and runoff from the stockpiled soils be controlled to prevent off-site discharge?
(e) What is the source of the bacteria to be utilized in the soil reclamation plan.

(4) In view of the questions set forth in item 3, the Department feels that a Feasibility Study Plan ("FSP") is necessary for both the drainfield excavation and the soil excavation/reclamation plan.

The FSP shall provide a detailed description of the technical approach Respondent shall use to address each task to be conducted during the F.S. At a minimum, the FSP shall address the following task elements:

° A. The objectives of the remedial action, as required by Department rules and state and federal statutes: e.g., to prevent groundwater contamination; to remove, contain or render harmless the contamination source; to cleanup to the water quality criteria and minimum standards in Florida Administrative Code Chapter 17-3; etc.:

° B. Risk assessment, which shall include consideration of the toxicity, transport mechanisms, persistence in the environment, and impacts on human health and the environment of the substances associated with the site;

° C. Methods to quantify contaminant movement off-site, to identify impact zones, and to identify and quantify hazardous zones;

Please feel free to contact me if you have any questions prior to the scheduled meeting date of April 16, 1986.

Sincerely,

Ronald Lane

Ronald Lane
Environmental Specialist

RL:ahy:h

cc: Richard Walesky/DER - WPB
Doug Wyckoff/OGC - Tallahassee

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Loctn: _____
To: _____ Loctn: _____
To: _____ Loctn: _____
From: _____ Date: _____

TO: Douglas Wyckoff

FROM: Ronald Lane, GW, Southeast District

DATE: March 26, 1986

SUBJECT: Berry's Warehouses

I have been asked to review the existing data pertaining to the property (and proposed warehouse facility) owned by Mr. Cliff Berry, and to evaluate the potential for contamination of this parcel from a northern parcel leased by Mr. Berry from the Amoco Oil Corporation. For clarification purposes, I will refer to these properties as the southern and northern parcels, respectively.

In a Contamination Assessment Report ("C.A.R.") submitted on March 7, 1986 for site closure of the northern parcel, the available data suggests that there may be more groundwater contamination present at the site than previously delineated. I have addressed these concerns in a March 25, 1986 letter to Terry Lawrence with the BCEQCB. The C.A.R. also delineates a clay layer present in the northern parcel which progressively thins in a southernly direction. Results submitted with the C.A.R. suggest that "The clay layer present throughout the site at Cliff Berry, Inc. seems to prevent the majority of the contamination found in the soil from reaching the groundwater."

There have been no test borings in the southern parcel (similar to those done in the northern parcel) which would help define the lithology and extent of the clay layer in the proposed stormwater lake area. Additional data is needed to further define the extent of the clay layer in this area, and what the potential impact on groundwater flow and contaminant transport from the northern parcel to the southern parcel would be if a stormwater detention pond were to be dug to 12 feet (below land surface) with the clay layer being removed. To this date, no groundwater flow directions have been delineated for either parcel.

Additionally, the fate of existing contaminants in lake sediments (and drainage ditch sediments) needs to be more clearly defined prior to any dredging and/or filling of the existing lake.

Consequently, until existing and additional data from both parcels can be correlated there is a definite possibility that dredge and fill activities in the southern parcel could induce groundwater flow with subsequent contaminant migration from the northern parcel.

RL:cb8

MORGAN, LEWIS & BOCKIUS
COUNSELORS AT LAW
3200 MIAMI CENTER
100 CHOPIN PLAZA
MIAMI, FLORIDA 33131
TELEPHONE: (305) 579-0300
CABLE ADDRESS: MORLEBOCK
TELEX: 51-2552

PHILADELPHIA
WASHINGTON
NEW YORK

LOS ANGELES
HARRISBURG
LONDON

RICHARD A. PETTIGREW
DIAL DIRECT (305) 579-0360

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FLORIDA DEPARTMENT OF
ENVIRONMENTAL REG.
WEST PALM BEACH

VIA FEDERAL EXPRESS

June 20, 1986

Victor N. Howard, P.E.
Pollution Control Officer
Broward County Environmental Quality
Control Board
500 S.W. 14th Court
Fort Lauderdale, Florida 33315

Re: **Comments on Contamination Assessment Report ("CAR") for Cliff Berry, Inc.**

Dear Mr. Howard:

This office, Enviropact, Inc. and Cliff Berry, Inc. have conferred regarding your letter of June 4, 1986.

Mr. Berry has authorized and directed that the work called for in your letter be performed and that the requested report be supplied.

After conferring with Enviropact, Inc. and based on its advices, we request a full ninety (90) days from the date of this letter or until September 20, 1986 to submit the final Contamination Assessment Report ("CAR") to EQCB. We will forward adequate copies for distribution to all concerned parties as you have requested. We will work with Mr. T.A. Lawrence in connection with complying with the requested installation of six (6) additional monitoring wells and any other details.

Sincerely,

Richard A. Pettigrew

RAP:aoh

cc: J.S. Benyon, DER, West Palm
T. Gogle, Amoco
J. Tostanoski, Enviropact, Inc.
G. Dean, DER, Tallahassee
T. Lawrence, BCEQCB

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

500 S.W. 14th Court
Fort Lauderdale, Florida 33315
(305) 765-5881

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FLA. DEPARTMENT OF
ENVIRONMENTAL REG.
WEST PALM BEACH

June 4, 1986

CERTIFIED — R.R.R.

Mr. Cliff Berry
Cliff Berry, Inc.
PO Box 13079
Port Everglades
Ft. Lauderdale, FL 33316

Subject: Comments on the Contaminant Assessment Report (CAR) dated 3/7/86, prepared by Enviropact, Inc. for the vacated Cliff Berry Waste Oil transfer station, 1000 S.E. 28 St., Port Everglades, Florida

Referenced: 1) FDER/WPB letter dated 3/25/86 to EQCB -- comments on CAR
2) Amoco Oil letter dated 4/15/86 to EQCB -- comments on CAR
3) FDER/Tallahassee letter dated 4/29/86 to BCEQCB -- comments on CAR

Dear Mr. Berry:

On 4/16/86, staff met with your representatives, members of FDER (Tallahassee) and Amoco Oil Co. personnel to discuss the subject report. Amoco Oil Co. and FDER (WPB and Tallahassee) have given us their comments in writing. As a result of these discussions and comments, it is the joint opinion of EQCB and DER staffs that the contaminant assessment that has been completed to date does not define the subsurface soil and groundwater problem to the degree necessary to formulate appropriate remedial actions. The requirements and recommendations in the above references have been incorporated into the requirements listed below.

1. Please submit an adequate Quality Assurance/Quality Control (QA/QC) plan. The QA/QC plan shall be prepared in accordance with the requirements set forth in the document titled "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, QAM5-005/80, December, 1980" prepared for the US EPA.

2. A water quality survey shall be conducted. This survey should be designed to determine the extent of contaminated groundwater and evaluate the impact on adjacent surface water quality. In this survey a minimum of six additional monitoring wells will be required to characterize groundwater contamination at your facility. The wells shall be installed at the following locations (see attached figure):
   a) Between drainfield #1 and drainfield #2.
   b) Near TB #7.
   c) Near TB #8.
   d) Near TB #6.
   e) Between west boundary excavation #1 and WB #2.
   f) Near south boundary excavation #4 (SB #4).

3. After two (2) weeks to allow for stabilization, water quality sampling shall be collected, from the six existing wells and the six new wells. Samples from these twelve wells should be analyzed for benzene, toluene, and xylene; individual phenolic compounds; the dissolved metals, arsenic, zinc, barium, and lead; and oil & grease determination. In addition, polychlorinated biphenyl (PCB) concentrations should be determined in samples collected from three of the new monitoring wells located near the drainfields, test bore #6, and test bore #7.

   Soil analysis shall not be required during the monitoring well installation. However, geologic logs and summary of field notes by on-site geologist and principal investigation will be submitted along with well completion reports.

The above requirements shall be completed and documented in a final report within ninety (90) days from the date of this letter. Also in the contaminant assessment report, the hydrogeology of the site should be discussed. This should include: 1. discussion of the spatial distribution of sediments and their characteristics to a depth of twelve (12) feet below grade; 2. estimates of vertical and horizontal permeability along with a thorough discussion of hydrogeologic characteristics of the site as they relate to the movement of problem contaminants; 3. site specific determination of direction and rate of groundwater flow and interface of groundwater with surface waters; and 4. inventory of all wells within a one (1) mile radius.

Upon receipt of the agency's approval of the contaminant assessment, a feasibility study of remedial actions should be done and a remedial action plan submitted to EQCB, detailing the proposed drainfield excavation and the soil excavation/reclamation activity. This plan should include the following:

1) Methods to quantify contaminant concentrations, and monitor contaminant movement.

2) Treatment techniques or removal methods for both soils and groundwaters.

3) Risk assessment, which shall include consideration of the toxicity, transport mechanisms, persistence in the environment, and potential impacts on human health and the environment of the substances identified on the site.

4) The objectives of the remedial action: to prevent future ground and surface water contamination; to remove, contain or render harmless the contamination source; to cleanup soils and groundwater at the site.

As agreed during the 4/16/86 meeting, Cliff Berry, Inc. shall respond to the above by Monday, June 30, 1986. Please submit the final contaminant assessment report to EQCB for distribution to all concerned parties. Please contact our staff hydrogeologist, Mr. T. A. Lawrence, for further details concerning the above.

Sincerely,

Victor N Howard

VICTOR N. HOWARD, P.E.
POLLUTION CONTROL OFFICER

cc: J.S. Benyon (DER/WPB)
T. Gogle (Amoco)
J. Tostanoski (Enviropact)
G. Dean (DER/Tall.)
R. Pettigrew (attorney)
Enforcement

VNH/TAL/sc
T3/ltrClBryll

PW ⇒ Ron Lane

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

500 S. W. 14th Court
Fort Lauderdale, Florida 33315
(305) 765-5881

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FL... ...NT OF
EN... ...AL REG.
WEST PALM BEACH

June 4, 1986

CERTIFIED — R.R.R.

Mr. Cliff Berry
Cliff Berry, Inc.
PO Box 13079
Port Everglades
Ft. Lauderdale, FL 33316

Subject: Comments on the Contaminant Assessment Report (CAR) dated 3/7/86, prepared by Enviropact, Inc. for the vacated Cliff Berry Waste Oil transfer station, 1000 S.E. 28 St., Port Everglades, Florida

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The above requirements shall be completed and documented in a final report within ninety (90) days from the date of this letter. Also in the contaminant assessment report, the hydrogeology of the site should be discussed. This should include: 1. discussion of the spatial distribution of sediments and their characteristics to a depth of twelve (12) feet below grade; 2. estimates of vertical and horizontal permeability along with a thorough discussion of hydrogeologic characteristics of the site as they relate to the movement of problem contaminants; 3. site specific determination of direction and rate of groundwater flow and interface of groundwater with surface waters; and 4. inventory of all wells within a one (1) mile radius.

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2) Treatment techniques or removal methods for both soils and groundwaters.

3) Risk assessment, which shall include consideration of the toxicity, transport mechanisms, persistence in the environment, and potential impacts on human health and the environment of the substances identified on the site.

4) The objectives of the remedial action: to prevent future ground and surface water contamination; to remove, contain or render harmless the contamination source; to cleanup soils and groundwater at the site.

As agreed during the 4/16/86 meeting, Cliff Berry, Inc. shall respond to the above by Monday, June 30, 1986. Please submit the final contaminant assessment report to EQCB for distribution to all concerned parties. Please contact our staff hydrogeologist, Mr. T. A. Lawrence, for further details concerning the above.

Sincerely,

Victor N Howard

VICTOR N. HOWARD, P.E.
POLLUTION CONTROL OFFICER

cc: J.S. Benyon (DER/WPB)
T. Gogle (Amoco)
J. Tostanoski (Enviropact)
G. Dean (DER/Tall.)
R. Pettigrew (attorney)
Enforcement

VNH/TAL/sc
T3/ltrClBryll

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
ENFORCEMENT TELEPHONE LOG

CASE NAME: Cliff Berry DATE: 2-16-87

CONTACT: Jim Pickett, Atty for Amoco, Chicago 312/856-7463

****

DISCUSSION:

Pickett called to check on status of pending superact application. Also, to report that Amoco had hired E.S.E. to do their own study of soil & gw conditions on site. They would like to put storage tanks on site and were not happy with progress of C. Berry.

PREPARED BY: J. Van Arman

Amoco Corporation
200 East Randolph Drive
Post Office Box 5910A
Chicago, Illinois 60680
312-856-7463

James D. Pickett
Attorney

RECEIVED
FEB 24 1987
Dept. of Environmental Reg.
West Palm Beach

February 16, 1987

Ms. Janet Peterson
Enviropact, Inc.
4790 NW 157th Street
Hialeah, Florida 33014

Dear Ms. Peterson:

Cliff Berry Site

Pursuant to your request during our February 10, 1987 meeting we are herewith enclosing Amoco's comments on Enviropact's contaminant assessment reports.

Sincerely,

James D. Pickett
Mail Code 2103

JDP:djs

Richard A. Pettigrew, Esq.
Morgan Lewis & Bockius
3200 Miami Center
100 Chopin Plaza
Miami, FL 33131

Ms. M. Wu
Broward County EQCB
500 SW 14th Court
Ft. Lauderdale, FL 33315

Mr. Ronald D. Lane
Department of Environmental Regulation
3301 Gun Club Road
West Palm Beach, FL 33402-3858

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LAW DEPARTMENT

Amoco Corporation
7201 East 38th Street (Space 7263)
Post Office Box 3385
Tulsa, Oklahoma 74102
Environmental and Energy Conservation
Environmental Affairs and
Safety Department
918 - 660-3218

Gene W. Schmidt
Director, Groundwater Management

November 7, 1986

CMS 86-822

Ms. M. Wu
Broward County EQCB
500 S.W. 14th Court
Ft. Lauderdale, FL 33315

Dear Ms. Wu:

Subject: Review of Contaminant Assessment Report For Cliff Berry Property, Ft. Lauderdale, Florida, October 10, 1986

Amoco Oil Company appreciates the opportunity to comment on the subject report.

Amoco is in general agreement that groundwater contamination by the constituents for which analyses were completed is minimal. The principle area of groundwater contamination appears to occur in the area of the storage tanks and the drainfield, as exhibited by the VOC concentrations in samples collected from well no. 1. However, some contamination is also indicated in the area of well no. 9 (Benzene concentration of 2.4 ug/L). Samples collected from other wells had total VOC concentrations of less than 50 ug/L, which is the standard normally implemented by the Florida Department of Regulation in groundwater restoration programs at service stations. Based on the analyses reported, groundwater contamination due to metals and PCB's does not appear to exist. The above comments are made in recognition of the fact that samples were not collected from well nos. 2 and 3. These wells should be sampled, and the results reported. Also, it is emphasized that although groundwater contamination appears minimal, significant soil contamination is present as reported in previous CAR's.

The discussion of the hydrogeology is very general. Based on the data, the principle direction of groundwater flow appears to be southwesterly, at least beneath the southern two-thirds of the property. However, well nos. 2 and 3 were damaged and not measured. These wells are located in the west-central and southwest corner of the site, respectively. Inclusion of measurement data from the wells could alter the interpreted direction of groundwater flow. Also, no explanation is given for the northeasterly direction of groundwater flow in the vicinity of well no. 6. Is it possible that the slight groundwater high depicted in the vicinity of well nos. 1,7,11, and 12 is a result of past discharge of water to the drainfield?

The authors state,

> "the 'basal' two units are the most sensitive units, as they can be considered to be the top of the aquifer and best able to transport contaminants. Figure 5 shows that this zone is closest to the surface (hence closest to the source of contamination) in the south central part of the site. Figure 4 shows that this fortunately does not exactly correspond to the area with the thinnest clay zone. In other words, the most permeable units on the site are protected by at least 5 ft of fill and clay, and the site where the protective units are thinnest is nonetheless covered by 2 feet of relatively impermeable clay."

This statement is misleading. In fact, basal sand and limestone are 5.5 ft below grade in the area of TB 4, and only 2.5 ft of clay is present above the basal units. The depth to the basal sand and limestone in TB 6 is given as 9.5 ft below grade. However, figure 4 indicates that only 0.5 ft of "relatively impermeable " peat is present above the basal units. Based on the above, it is doubtful that the clay layer can function as a barrier to downward movement of contamination in this area.

Several of the items of investigation requested by BCEQCB in their letter dated June 4, 1986, were not supplied in this report. These items include:

1. estimates of vertical and horizontal permeability other than usuage of the terms "relatively permeable, relatively impermeable, and low permeability".

2. determination of the rate of groundwater flow.

3. an inventory of all wells within a one mile radius of the site.

4. has a QA/QC plan been submitted?

As mentioned in my recent correspondence, Amoco desires to continue the opportunity to comment on any reports that are forthcoming concerning this property. Also, Amoco would appreciate continued participation in any meetings which are held to discuss work or results of investigations at the site. Thank you for your cooperation.

Sincerely,

T Hogel

T. Gogel
Certified Ground Water Professional

TG:mph
86311ART0133

cc: R. G. Farmer, Chicago
M. P. Hubbarth, Chicago
J. A. Lamping, Chicago
J. Pickett, Chicago
G. W. Schmidt, Tulsa
C. B. Smiley, Ft. Lauderdale
S. B. Thomas, Chicago

Amoco Corporation
Box 3385 (Research Center)
4502 East 41st Street
Tulsa, Oklahoma 74102
Environmental and Energy Conservation
Division of Environmental Affairs and
Safety Department
918-660-3218

Gene W. Schmidt
Director, Groundwater Management

GMS 86-264

April 15, 1986

Mr. T. Lawrence
Broward County EQCB
500 S.W. 14th Court
Ft. Lauderdale, FL 33315

Subject: Review of Contamination Assessment Report and Recommendations for Remedial Action, Cliff Berry, Incorporated Site Closure

Amoco Oil Company appreciates the opportunity to comment on the subject report. Following are my comments.

RESULTS

Soil Samples

1. Second paragraph states that no phenols were found in the soil samples, yet phenol concentrations were determined to be present in many of the soil samples collected during the initial investigation. In particular, 127 mg/kg were analyzed in the Drainfield No. 2 sample, 13.6 mg/kg were analyzed in the South Boundary 2B soil/water interface sample, and 121 mg/kg were analyzed in the South Boundary 6A soil/water interface sample. Lower concentrations in other soil samples were also reported in the initial work.

2. PCB concentrations were found in only two soil samples collected duirng the recent investigation. However, concentrations were present in several samples collected during the initial investigation, particularly the Drain Field No. 2 sample.

3. Second paragraph. A concentration of 63 ppb total xylene was reported in the 0-1 ft sample from boring 7. This is in addition to the 50.2 ppm concentration reported in the intermediate sample from the same boring.

4. Third paragraph. Oil abnd grease concentrations do not decrease with depth in samples from test boring nos. 1, 5, 6, 9, and 12.

BROWARD COUNTY ENVIRONMENTAL QUALITY CONTROL BOARD

500 S.W. 14th Court
Fort Lauderdale, Florida 33315
(305) 765-5881

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FL. DEPT OF
ENV. REG.
WEST PALM BEACH

July 7. 1986

CERTIFIED — R.R.R.

Mr. Cliff Berry
Cliff Berry. Inc.
PO Box 13079
Port Everglades
Ft. Lauderdale. FL 33316

Subject: Environmental assessment of the vacated Cliff Berry waste oil transfer station. 1000 SE 28 Street. Port Everglades. Florida

Reference: 1) EQCB letter dated 6/4/86 to C. Berry — Regulatory comments and additional requirements on submitted CAR/PRAP.
2) Morgan Lewis & Bockius letter dated 6/20/86 to EQCB — response to the 6/4/86 EQCB letter.

Dear Mr. Berry:

We have received your response to our letter dated 6/4/86 (see reference #1). which acknowledges all the additional requirements and further requests a ninety (90) day extension for the final CAR submittal. This letter shall serve as notice to proceed to conduct the hydrogeologic assessment as outlined in our 6/4/86 letter and further require submittal of a final CAR (five copies) to the EQCB on or before September 20. 1986.

Sincerely.

Victor N Howard

VICTOR N. HOWARD. P.E.
POLLUTION CONTROL OFFICER

cc: J.S. Benyon (DER/WPB)
G. Dean (FDER/Tallahassee)
T. Gogle (Amoco)
J. Tostanoski (Enviropact)
R. Pettigrew

VNH/TAL/sc
T3/ltrClBryl2

Enviropact, Inc.
Environmental Consulting and Analysis

CONTAMINATION ASSESSMENT REPORT
AND
RECOMMENDATIONS FOR REMEDIAL ACTION

CLIFF BERRY, INCORPORATED
SITE CLOSURE

MARCH 7, 1986

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SUBMITTED TO:

B.C.E.Q.C.B.
500 S.W. 14TH COURT
FT. LAUDERDALE, FLORIDA

AND

STATE OF FLORIDA DER
SOUTHEAST FLORIDA DISTRICT
P.O. BOX 3858
WEST PALM BEACH, FLORIDA

SUBMITTED BY:

ENVIROPACT, INC.
4790 N.W. 157 STREET
HIALEAH, FLORIDA

RECEIVED
MAR 7 1986
Broward County
ENVIRONMENTAL QUALITY CONTROL BOARD

Enviropact, Inc.
Environmental Consulting and Analysis

RECEIVED
MAR 17 1986
Dept. of Environmental Reg.
West Palm Beach

INTRODUCTION AND BACKGROUND

Enviropact, Inc. has completed a contamination assessment project at Cliff Berry, Inc. in Port Everglades, Ft. Lauderdale, Florida. This study was undertaken as a step toward obtaining approval for closure at the site, and is a continuation of one conducted in April 1985.

The preliminary investigation consisted of taking samples from trenches dug on the western and southern edges of the property (labelled D.F., W.B. and S.B. in Figure 1). Soil and water samples from the trenches were found to contain phenols, PCB's, oil/grease, EPA test series 602 compounds, and barium, chromium, and lead.

Samples were collected using more conventional methods during the course of this investigation. Soil samples were collected in 12 soil borings taken using a penetration drilling, split spoon method (ASTM D1586) in accordance with "Soil Boring, Monitoring Well, and Associated Protocols" submitted to the B.C.E.Q.C.B. with the proposal for this study. Water samples were collected from six monitoring wells installed and developed according to B.C.E.Q.C.B. specifications. Wells were constructed of 2 feet of riser casing and 17 feet of well screen, and secured with a locking steel casing. All spoons, rods, and augers were steam-cleaned between holes. See Figure 1 for the location of soil borings and monitoring wells.

RESULTS

1. SOIL SAMPLES

   Splits from the surface (0 to 1 foot), water table/soil interface (4 to 5 feet, except 6 to 7 feet in soil borings 1, 7, and 12), and 14 to 15 feet were analyzed for phenols, oil/grease (soxhlet), EPA test series 602 compounds, PCB scan, and metals barium, chromium, and lead. Results are attached as Appendix I.

   Most of the soil contamination at Cliff Berry, Inc. is due to metals and oil/grease. No phenols were found in the soil. Two samples (soil boring 3, 0 to 1 foot, and soil boring 6, 14 to 15 feet) contained trace amounts of PCB's (2.0 and 1.5 ppm

respectively). Various 602 compounds such as xylene, benzene, 1,3- and 1,4-dichlorobenzene are present in all borings except 9 and 10 at low levels (mostly less than 20 ppm). The only sample with higher concentrations of volatile organic compounds is the water table/soil interface split from boring 7, where 50.2 ppm xylene and 284.0 ppm 1,4-dichlororbenzene were detected.

Oil and grease were found in every soil sample. Generally, the greatest concentrations (15,369 ppm to 181 ppm) are at the surface, and decrease with depth (1544 ppm to 26 ppm at 14 to 15 feet). Barium is the metal found in greatest concentrations at this site. Barium is present in all samples, in concentrations ranging from 23 ppm in the 14 to 15 feet split of boring 9 to 1190 ppm in boring 1 at 14 to 15 feet. Generally, barium concentration increases with depth.

Lead levels, on the other hand, generally decrease with depth. Lead is found in almost every soil sample, in concentrations ranging from 1.1 ppm to 238 ppm. Two samples, soil boring 2 and 3, 0-1 foot, had lead in sufficiently high concentrations to run extraction procedure leachable tests. Results of the tests showed only small amounts of leachable lead (see Appendix I). Chromium is also present in almost every sample; however, this metal shows no trend in concentration with depth.

2. GROUNDWATER SAMPLES

Of the parameters analyzed, phenols are the only compounds found in the monitoring wells at Cliff Berry, Inc. in concentrations which exceed groundwater standards. Total phenols ranged in concentration from 0.03 mg/l to 0.11 mg/l; this range is above the B.C.E.Q.C.B. standard for phenols of 0.001 mg/l. Other contaminants found below groundwater standards are: zinc (0.09 mg/l to 0.18 mg/l) in all six wells; nickel (0.17 mg/l) in well 4; and oil/grease in concentrations of 1.0 mg/l in four of the wells. Other metals and the 602 compounds were not found in any of the groundwater samples.

DISCUSSION AND RECOMMENDATIONS

Comparison of soil and groundwater data and site-specific geological conditions aides in the interpretation of the data gathered at Cliff Berry, Inc. The clay layer present throughout the site at Cliff Berry, Inc. seems to prevent the majority of the contamination found in the soil from reaching the groundwater. Figures 2 and 3 are geological cross sections (see Figure 1 for index map) north-south and east-west across the site. The clay is almost eleven (11) feet thick in the north and decreases to five (5) feet in thickness at the southern end of the property. This low permeability clay layer appears to cover the entire area; evidence of the unit is found in every boring (see geologic logs attached as Appendix II) except 6, and was found in most of the trenches as well.

A comparison of the data collected from the trenches and data collected by more conventional (and presumably more accurate) methods from the same area is shown in Table 1. Data collected from the same area on the western side of the site, trench WB4 and boring 5/well 2, are used for comparison.

Overall, data from soil collected using a split spoon and soil from the trench correspond fairly well. Soil collected at the soil/water table interface in the trench contains less lead and oil/grease but greater concentrations of PCB's and phenols than the corresponding sample taken using a split spoon.

Water samples collected by the different methods show a greater discrepancy. Metals and 602 compounds are present in the water collected in the trench, whereas these constituents are absent (except zinc) in water collected from the monitoring well. Oil/grease and phenols are also found in lower concentrations in groundwater from the monitoring well than in standing water in the trench.

We believe that the second set of soil and groundwater data more accurately reflect contamination at Cliff Berry, Inc. The crude and imprecise methods of sample collection in the trenches lead to unrepresentative samples and more possibilities for cross-contamination.

TABLE 1

SOIL

	WB4A soil/watertable interface	TB5 0 - 1	4 - 5	14 - 15
Barium	210 ppm	253 ppm	646 ppm	902 ppm
Chromium (total)	1.9	6.8	8.6	7.2
Lead	< 1.0	36	9.9	2.3
PCB's	3.2	< 1	< 1	< 1
Benzene	< 1.0	21.2	< 1	17.8
Oil & Grease	205	5697	1419	51
Phenols	3.1	< 1	< 1	< 1

GROUNDWATER

	WB4 standing water in trench	W-2 monitoring well
Arsenic	0.01 mg/l	< 0.005 mg/l
Barium	1.53	——
Chromium	0.02	< 0.005
Lead	0.02	< 0.005
Zinc	——	0.12
Xylene	6.4 µg/l	< 1 µg/l
1,3-dichlorobenzene	658 µg/l	< 1 µg/l
Benzene	19.4 µg/l	< 1 µg/l
Oil & Grease	5 mg/l	1.0 mg/l
Phenols (total)	0.09	0.04

APPENDIX I

RESULTS

(se results attached to draft copy of this report)

Based on the results of the two rounds of sampling at Cliff Berry, Inc., Enviropact, Inc. recommends the following remedial action plan for the site:

1. Monitor groundwater quality in the six (6) new wells on a quarterly basis for one year, and semi-annually for the next two years. Samples will be analyzed for phenols, oil/grease, PCB scan, and barium, chromium, and lead. The clay layer seems to effectively contain most contamination, but monitoring groundwater periodically for the next few years for contaminants known to be in the soil will confirm our hypothesis.

2. Monitor water in the unsaturated zone along the southern and southeastern edges of the site. This remedial action is necessary to insure that contaminants are not leaching into the lake to the south and the borrow canals to the east of the site. This will be done by analyzing samples taken from 2 foot long suction lysimeters installed in locations shown in Figure 4. The depth to the top of the clay layer as seen in trenches and soil borings ranges from 2 feet (S.B. 3) to 5 feet (T.B. 1) below land surface. Lysimeters will be sampled at the same time as the monitoring wells and for the same parameters.

3. Areas found to contain elevated (greater than 10,000 ppm) levels of oil/grease in the soil will be excavated to the depth of the water table. High concentrations of oil/grease are found along the eastern edge of the site (T.B. 3, T.B. 12, T.B. 8). Soil excavated will be spread out in the southeastern corner of the site and treated with 8-8-8 fertilizer to reduce levels of oil and grease (approximately 60 to 100 pounds of fertilizer per acre of soil). Soil moisture must be maintained at 20 to 25%; this will be accomplished by attaching a moisture meter to a sprinkler system. To ensure that all soil is exposed to the bacterial action of the fertilizer, the soil will be tilled once or twice a week.

4. Drainfields 1 and 2 on the northeastern perimeter of the site will also be excavated. These drainfields were found to contain PCB's in both the soil and water. We need to define the extent of PCB contamination (both in terms of concentration and areal extent) more accurately; this will be done by a dig and test method. We are unable to specify the fate of soil excavated from these drainfields until further analyses are done on the soil. Groundwater in the excavated drainfields will be filtered to reduce levels of PCB contamination.

Enviropact, Inc.
Environmental Consulting and Analysis

4790 N.W. 157 Street
Hialeah, Florida 33014
Telephone: (305) 620-1700
Fla. Watts: (800) 432-9706

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 14, 1986
Report 15824
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM SURFACE

REPORT OF ANALYSIS : TB 1, 0-1 FT.		UNITS
BARIUM	369	ppm
CHROMIUM, TOTAL	4.8	ppm
LEAD	6.9	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	324	ppm

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Analyses performed in accordance with E.P.A., A.S.T.M. Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 1, 6-7 FT.		UNITS
BARIUM	1,050	ppm
CHROMIUM, TOTAL	7.5	ppm
LEAD	12	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	12.2	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	209	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143 Page 3 of 34

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P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 14, 1986
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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 1, 14-15 FT.		UNITS
BARIUM	1,190	ppm
CHROMIUM, TOTAL	9.3	ppm
LEAD	1.1	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	237	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

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ATT : CLIFF BERRY
Sample Received: 12/20/85
Sample Designation:SOIL SAMPLE FROM SURFACE

Collected By: J. PETERSON

REPORT OF ANALYSIS : TB 2, 0-1 FT.		UNITS
BARIUM	141	ppm
CHROMIUM, TOTAL	3.7	ppm
LEAD	101	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	1,656	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

CLIFF BERRY INDUSTRIES
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FT.LAUDERDALE, FL 33316

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 2, 4-5 FT.		UNITS
BARIUM	277	ppm
CHROMIUM, TOTAL	7.1	ppm
LEAD	50	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	3.0	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	14.9	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	1,367	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 2, 14-15 FT.		UNITS
BARIUM	791	ppm
CHROMIUM, TOTAL	6.0	ppm
LEAD	0.5	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	23.0	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	161	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J Korn

Lawrence J Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

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FT.LAUDERDALE, FL 33316

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Sample Received: 12/20/85
Sample Designation:SOIL SAMPLE FROM SURFACE

Collected By: J. PETERSON

REPORT OF ANALYSIS : TB 3, 0-1 FT.		UNITS
BARIUM	89	ppm
CHROMIUM, TOTAL	17	ppm
LEAD	238	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	17.2	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	2.0	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	15,369	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

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Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 3, 4-5 FT.		UNITS
BARIUM	306	ppm
CHROMIUM, TOTAL	6.1	ppm
LEAD	15	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	11.3	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	262	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

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Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

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Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 3, 14-15 FT.		UNITS
BARIUM	241	ppm
CHROMIUM, TOTAL	6.8	ppm
LEAD	< 0.1	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	2.8	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	13.1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	64	ppm

based on dry wt. of soil

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Laboratory Supervisor
Enviropact, Inc.

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Sample Designation:SOIL SAMPLE FROM SURFACE

REPORT OF ANALYSIS : TB 4, 0-1 FT.		UNITS
BARIUM	841	ppm
CHROMIUM, TOTAL	6.4	ppm
LEAD	29	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	21.2	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	5,697	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

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Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 4, 4-5 FT.		UNITS
BARIUM	673	ppm
CHROMIUM, TOTAL	4.9	ppm
LEAD	1.1	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	1,419	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

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Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 4, 14-15 FT.		UNITS
BARIUM	583	ppm
CHROMIUM, TOTAL	5.6	ppm
LEAD	0.5	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	17.8	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	51	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

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Laboratory Supervisor
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Environmental Consulting and Analysis

1143

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ATT : CLIFF BERRY
Sample Received: 12/20/85
Sample Designation:SOIL SAMPLE FROM SURFACE

Collected By: J. PETERSON

REPORT OF ANALYSIS : TB 5, 0-1 FT.		UNITS
BARIUM	253	ppm
CHROMIUM, TOTAL	6.8	ppm
LEAD	36	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	9.9	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	2,950	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

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Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 14, 1986
Report 15824
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 5, 4-5 FT.		UNITS
BARIUM	646	ppm
CHROMIUM, TOTAL	8.6	ppm
LEAD	9.9	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	16.2	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	347	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

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January 14, 1986
Report 15824
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 5, 14-15 FT.		UNITS
BARIUM	902	ppm
CHROMIUM, TOTAL	7.2	ppm
LEAD	2.3	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	13.8	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	7.2	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	473	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

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Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM SURFACE

REPORT OF ANALYSIS : TB 6, 0-1 FT.		UNITS
BARIUM	202	ppm
CHROMIUM, TOTAL	6.3	ppm
LEAD	86	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	15.2	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	1,990	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

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Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 6, 4-5 FT.		UNITS
BARIUM	288	ppm
CHROMIUM, TOTAL	11	ppm
LEAD	17	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	16.6	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	18.0	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	3,384	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Laboratory Supervisor
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January 14, 1986
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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 6, 14-15 FT.		UNITS
BARIUM	573	ppm
CHROMIUM, TOTAL	8.7	ppm
LEAD	1.7	ppm
TOLUENE	21.1	ppm
XYLENE, TOTAL	17.3	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	1.5	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	26	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

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Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

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CLIFF BERRY INDUSTRIES
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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM SURFACE

REPORT OF ANALYSIS : TB 7, 0-1 FT.		UNITS
BARIUM	424	ppm
CHROMIUM, TOTAL	8.1	ppm
LEAD	31	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	63.0	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	5,198	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Laboratory Supervisor
Enviropact, Inc.

Enviropact Inc.
Environmental Consulting and Analysis

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 7, 6-7 FT.		UNITS
BARIUM	571	ppm
CHROMIUM, TOTAL	4.6	ppm
LEAD	8.1	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	50.2	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	284	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	281	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

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Laboratory Supervisor
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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 7, 14-15 FT.		UNITS
BARIUM	836	ppm
CHROMIUM, TOTAL	30	ppm
LEAD	3.4	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	133	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM SURFACE

REPORT OF ANALYSIS : TB 8, 0-1 FT.		UNITS
BARIUM	58	ppm
CHROMIUM, TOTAL	5.9	ppm
LEAD	30	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	4.9	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	9.3	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	10,872	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

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Environmental Consulting and Analysis

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January 14, 1986
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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 8, 14-15 FT.		UNITS
BARIUM	850	ppm
CHROMIUM, TOTAL	8.4	ppm
LEAD	2.9	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	88	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Laboratory Supervisor
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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 8, 4-5 FT.		UNITS
BARIUM	180	ppm
CHROMIUM, TOTAL	2.3	ppm
LEAD	5.8	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	18.0	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	14.8	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	10,428	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

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Laboratory Supervisor
Enviropact, Inc.

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ATT : CLIFF BERRY
Sample Received: 12/20/85
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Sample Designation:SOIL SAMPLE FROM SURFACE

REPORT OF ANALYSIS : TB 9, 0-1 FT.		UNITS
BARIUM	332	ppm
CHROMIUM, TOTAL	8.3	ppm
LEAD	34	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	2,479	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Lawrence J. Korn
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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 9, 4-5 FT.		UNITS
BARIUM	130	ppm
CHROMIUM, TOTAL	5.0	ppm
LEAD	8.7	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	281	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 9, 14-15 FT.		UNITS
BARIUM	23	ppm
CHROMIUM, TOTAL	< 0.1	ppm
LEAD	< 0.1	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	1,544	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Laboratory Supervisor
Enviropact, Inc.

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ATT : CLIFF BERRY
Sample Received: 12/20/85
Sample Designation:SOIL SAMPLE FROM SURFACE

Collected By: J. PETERSON

REPORT OF ANALYSIS : TB 10, 0-1 FT.		UNITS
BARIUM	207	ppm
CHROMIUM, TOTAL	22	ppm
LEAD	13	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	181	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 10, 4-5 FT.		UNITS
BARIUM	458	ppm
CHROMIUM, TOTAL	4.4	ppm
LEAD	0.5	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	120	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 10, 14-15 FT.		UNITS
BARIUM	894	ppm
CHROMIUM, TOTAL	6.7	ppm
LEAD	< 0.1	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	39	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact. Inc.
Environmental Consulting and Analysis

1143

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ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM SURFACE

REPORT OF ANALYSIS : TB 11-A, 0-1 FT.		UNITS
BARIUM	178	ppm
CHROMIUM, TOTAL	6.3	ppm
LEAD	39	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	242	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 14, 1986
Report 15824
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM SURFACE

REPORT OF ANALYSIS : TB 12, 0-1 FT.		UNITS
BARIUM	61	ppm
CHROMIUM, TOTAL	14	ppm
LEAD	64	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	1,756	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 14, 1986
Report 15824
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM WATER TABLE/SOIL INTERFACE.

REPORT OF ANALYSIS : TB 12, 6-7 FT.		UNITS
BARIUM	267	ppm
CHROMIUM, TOTAL	6.2	ppm
LEAD	39	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	12.6	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	20,755	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 14, 1986
Report 15824
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 12/20/85 Collected By: J. PETERSON
Sample Designation:SOIL SAMPLE FROM BASE OF BORING.

REPORT OF ANALYSIS : TB 12, 14-15 FT.		UNITS
BARIUM	370	ppm
CHROMIUM, TOTAL	11	ppm
LEAD	< 0.1	ppm
TOLUENE	< 1	ppm
XYLENE, TOTAL	< 1	ppm
CHLOROBENZENE	< 1	ppm
1,3-DICHLOROBENZENE	< 1	ppm
1,2-DICHLOROBENZENE	< 1	ppm
1,4-DICHLOROBENZENE	< 1	ppm
BENZENE	< 1	ppm
ETHYL BENZENE	< 1	ppm
PCB 1016	< 1	ppm
PCB 1221	< 1	ppm
PCB 1232	< 1	ppm
PCB 1242	< 1	ppm
PCB 1248	< 1	ppm
PCB 1254	< 1	ppm
PCB 1260	< 1	ppm
PHENOLS, TOTAL	< 1	ppm
OIL & GREASE , SOXHLET	138	ppm

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

C.C. BILL KEATS
MIKE AMBROSE
VICTOR HOWARD P.E.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

4790 N.W. 157th Street
Hialeah, Florida 33014
Telephone: (305) 620-1700
Fla. Watts (800) 432-9706

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE,FL 33316

January 31,1986
Report 16091
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/24/86
Sample Designation:15824

Collected By: J. PETERSON

REPORT OF ANALYSIS : LEAD-E.P.TOXIC		UNITS
TB 2(0-1')	0.17	mg/l
TB 3(0-1')	< 0.05	mg/l

RECEIVED
JAN 31 1986
Broward County
ENVIRONMENTAL QUALITY CONTROL BOARD

Analyses made in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully submitted,

Lawrence J. Korn
Laboratory Supervisor

Enviropact, Inc.
Environmental Consulting and Analysis

4790 N.W. 157 Street
Hialeah, Florida 33014
Telephone: (305) 620-1700
Fla. Watts: (800) 432-9706

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W1		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.09	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	<	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	1	mg/l
PHENOLS, TOTAL	0.03	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully submitted,

Lawrence J. Korn

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86 Collected By: M. MONFRIES
Sample Designation:ANALYSIS AS NOTED

REPORT OF ANALYSIS : WELL - W2		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.12	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	1	mg/l
PHENOLS, TOTAL	0.04	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86 Collected By: M. MONFRIES
Sample Designation:ANALYSIS AS NOTED

REPORT OF ANALYSIS : WELL - W3		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.18	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
PHENOLS, TOTAL	0.03	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W4		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	0.17	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.11	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	1	mg/l
PHENOLS, TOTAL	0.11	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

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CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W5		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.09	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
PHENOLS, TOTAL	0.05	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W6		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.16	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
PHENOLS, TOTAL	0.04	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J Korn
Laboratory Supervisor
Enviropact, Inc.

APPENDIX II

GEOLOGIC LOGS

GEOLOGIC LOG

BORE HOLE NUMBER: TB 1

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-2 ft	Limestone	Soil and light gray-brown clayey limestone
	2-4	Sand	Black fine-grained quartz sand, very organic
	4-5	Sand	Light gray fine-grained quartz sand, some limestone fragments
	5-10.5	Clay	Dark brown-gray clay
	10.5-10.9	Sand	Various colors of fine-grained quartz sand, varies from medium gray at top to black to medium brown
	10.9-15	Limestone	Cream-colored oolitic lime sand, unconsolidated

Sample(s) 0-1,6-7,14-15ft were analyzed (log #15824), all other samples archived. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon coring device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 2

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-15 ft.	Soil	Dark brown organic sand
	1.5-3.0	Sand	Dark brown oolitic (calcareous) sand and rotting wood
	3.0-7.0	Clay	Medium brown-gray clay
	7.0-7.7	Sand	Dark brown-black fine-grained organic quartz sand
	7.7-8.7	Sand	Medium brown medium-grained quartz sand
	8.7-15	Limestone	Cream-colored oolitic lime sand, unconsolidated, compact and hard

Sample(s) 0-1,4-5,14-15 ft were analyzed (log # 15824), all other samples archived. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon coring device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 3

CLIENT: Cliff Berry
DRILLING CONTRACTOR: J. M. Hensley Drilling Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-5.0 ft	Sand	Dark-brown-black organic sand, very fine-grained, silty, organic, wood fragment
	5.0-9.5	Clay	Dark brown clay and peat
	9.5-11.8	Sand	Medium gray medium-grained quartz sand
	11.8-13.5	Sand	Light brown fine-grained quartz sand
	13.5-15	Limestone	Cream-colored oolitic lime sand, unconsolidated, compact and hard

Sample(s) 0-1, 4-5, 14-15 ft. were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140 pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 5

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-2.5 ft	Soil	Dark brown sandy organic soil
	2.5-3	Concrete	------
	3-8	Clay	Dark brown-gray clay, peat and wood, one-inch of peat at base
	8-11	Sand	Medium gray-brown medium-grained quartz sand
	11-15	Limestone	Cream-colored oolitic calcareous sand, unconsolidated

Sample(s) 0-1,4-5,14-15 ft were analyzed (log # 15824), all other samples archive. Standard sampling and equipment decontamination Procedures were used.
The above boring was conducted in accordance with A.S.T.M. D1586 drilling and sampling procedures using penetration drilling equipment with a 140-lb pile driven hammer and 1 " ID 24" long split-spoon cording device.
Boring was abandoned immediately upon completion.

GEOLOGIC LOG

BORE HOLE NUMBER: TB 1

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/ 20/85
LOGGED AND SAMPLED BY: J. Peterson

?MATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0 - 2 ft	Limestone	Soil and light gray-brown clayey limestone
	2 - 4	Sand	Black fine-grained quartz sand, very organic
	4 - 5	Sand	Light gray fine-grain quartz sand, some limestone fragments
	5 - 10.5	Clay	Dark brown - gray clay
	10.5 - 10.9	Sand	Various colors of fine-grained quartz sand, varies from medium gray at top to black to medium brown
	10.9 - 15	Limestone	Cream-colored oolitic lime sand, unconsolidated, cuttings from injection well

AMPLE(S) 0-1, 6-7, 14-15 ft WERE ANALYZED (LOG# 15824), ALL OTHER SAMPLES RCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION ROCEDURES WERE USED.

HE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M.)-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION RILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

ORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

GEOLOGIC LOG

BORE HOLE NUMBER: TB 2

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

RMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0 - 1.5 ft	Soil	Dark brown - black organic sand
	1.5 - 3.0	Sand	Dark brown oolitic (calcareous) sand, and rotting wood
	3.0 - 7.0	Clay	Medium brown - gray clay
	7.0 - 7.7	Sand	Dark brown - black fine-grained ganic quartz sand
	7.7 - 8.7	Sand	Medium brown medium-grained quartz sand
	8.7 - 15	Limestone	Cream - colored oolitic lime sand, unconsolidated, compact and hard uttings from injection well

SAMPLE(S) 0-1, 4-5, 14-15 ft WERE ANALYZED (LOG # 15824), ALL OTHER SAMPLES ARCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION PROCEDURES WERE USED.
THE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. D-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION DRILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE
BORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

EOLOGIC LOG

BORE HOLE NUMBER: TB 3

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

RMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0 - 5.0ft	Sand	Dark-brown - black organic sand, very fine - grained, silty, organic, wood fragments
	5.0 - 9.5	Clay	Dark brown clay and peat
	9.5 - 11.8	Sand	Medium grey medium - grained quartz sand
	11.8 - 13.5	Sand	Light brown fine - grained quartz sand
	13.5 - 15	Limestone	Cream - colored oolitic lime sand, unconsolidated, compact and hard, cuttings from injection well

AMPLE(S) 0-1, 4-5, 14-15ft WERE ANALYZED (LOG# 15824), ALL OTHER SAMPLES RCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION ROCEDURES WERE USED.
HE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M.)-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION RILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 ½" ID 24" LONG SPLIT-SPOON CORING DEVICE
ORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

GEOLOGIC LOG

BORE HOLE NUMBER: TB 4

CLIENT: Cliff Berry, Inc.

DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.

DATE: 12/20/85

LOGGED AND SAMPLED BY: J. Peterson

RHATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1 ft	Soil	Brown sandy organic soil
	1-3	Sand	Black medium-grained sand, undetermined odor (blasting sand)
	3-5.5	Clay	Dark brown clay and peat, peat more predominant toward base
	5.5-6.2	Sand	Medium gray-brown medium-grained quartz sand
	6.2-15	Limestone	Cream-colored oolitic lime sand unconsolidated, cuttings from injection well

SAMPLE(S) 0-1, 4-5, 14-15 ft WERE ANALYZED (LOG# 15824), ALL OTHER SAMPLES ARCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION PROCEDURES WERE USED.

THE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. D-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION DRILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

BORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

EOLOGIC LOG

BORE HOLE NUMBER: TB 5

CLIENT: Cliff Berry, Inc.

DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.

DATE: 12/20/85

LOGGED AND SAMPLED BY: J. Peterson

RMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-2.5 ft	Soil	Dark brown sandy organic soil
	2.5-3	Concrete	—
	3 - 8	Clay	Dark brown - gray clay, peat, and wood, one-inch of peat at base
	8 - 11	Sand	Medium gray - brown medium-grained quartz sand
	11 - 15	Limestone	Cream - colored oolitic calcareous sand, unconsolidated cuttings from injection well

SAMPLE(S) ~~0-1, 4.5-11.5~~ WERE ANALYZED (LOG# 15824), ALL OTHER SAMPLES ARCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION PROCEDURES WERE USED.

THE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. D-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION DRILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

BORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

GEOLOGIC LOG

BORE HOLE NUMBER: TB 6

CLIENT: Cliff Berry, Inc.

DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.

DATE: 12/20/85

LOGGED AND SAMPLED BY: J. Peterson

RHATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0 - 0.5 ft	Soil	Dark brown sandy organic soil
	0.5 - 2	Sand	Medium brown-gray fine-grained sand, few limestone fragments
	2 - 9	Gravel (?)	Black sand, clay, gravel, few dark spots which appear oily, metal pieces, soupy silt and asphalt. Poor recovery throughout interval
	9 - 9.5	Peat	Dark brown-gray peat
	9.5 - 10.5	Sand	Medium brown-gray medium-grained quartz sand
	10.5 15	Limestone	Cream-colored oolitic calcareous sand, unconsolidated cuttings from injection well

SAMPLE(S) 0-1, 4-5, 14-15 ft WERE ANALYZED (LOG # 15824), ALL OTHER SAMPLES ARCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION PROCEDURES WERE USED.

THE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. D-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION DRILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

BORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

GEOLOGIC LOG

BORE HOLE NUMBER: TB7

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

RHATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-0.5ft	Limestone	Lime rock fill
	0.5-1.5	Clay	Dark brown organic clay, compact, 1 inch of asphalt within layer?, hydrocarbon odor
	1.5-2.5	Peat	Brown-gray clayey peat
	2.5-5	Sand	Light gray, fine-grained sand, slightly calcareous, asphalt within layer?
	5-12	Clay and Peat	Dark brown-gray organic, clayey peat, becomes light brown last few inches
	12-13	Sand	Medium gray medium-grained sand
	13-15	Limestone	Oolitic sand, unconsolidated, not compacted

AMPLE(S) 0-1, 6-7, 14-15ft WERE ANALYZED (LOG# 15824), ALL OTHER SAMPLES ARCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION PROCEDURES WERE USED.

THE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. D-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION DRILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

BORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

GEOLOGIC LOG

BORE HOLE NUMBER: TB 8

CLIENT: Cliff Berry, Inc.

DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.

DATE: 12/20/85

LOGGED AND SAMPLED BY: J. Peterson

FORMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0 - 2 ft	Soil	Dark brown sandy soil, looks oily and smells like diesel, outside of spoon oily
	2 - 8	Clay and Peat	Dark brown - gray clay, grading into peat toward base, saturated with fuel
	8 - 8.5	Sand	Dark gray medium-grained sand
	8.5 - 15	Limestone	Cream-colored unconsolidated limestone fragments from injection well; abundant cave in this interval

SAMPLE(S) 0-1, 4-5, 14-15 ft WERE ANALYZED (LOG # 15824), ALL OTHER SAMPLES ARCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION PROCEDURES WERE USED.

THE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. D-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION DRILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

BORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

EOLOGIC LOG

BORE HOLE NUMBER: TB 9

CLIENT: Cliff Berry, Inc.
DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.
DATE: 12/20/85
LOGGED AND SAMPLED BY: J. Peterson

?HATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1.2	Soil	Medium brown sandy soil, limestone fragments
	1.2-12	Clay	Medium gray brown clay, silty at top, contains organic material at base, becomes darker colored with greater organic portion, odor at 5 ft
	12-12.5	Sand	Medium brown medium-grained sand
	12.5-15	Limestone	Cream-colored unconsolidated limestone fragments from injection well; slightly sandy as well

AMPLE(S) 0-1, 4-5, 14-15ft WERE ANALYZED (LOG# 15824), ALL OTHER SAMPLES RCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION ROCEDURES WERE USED.

HE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M.)-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION RILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

ORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

GEOLOGIC LOG

BORE HOLE NUMBER: TB 10

CLIENT: Cliff Berry, Inc.

DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.

DATE: 12/20/85

LOGGED AND SAMPLED BY: J. Peterson

'MATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1 ft	Soil	Dark brown, organic soil
	1 - 8.5	Clay and Peat	Dark brown clay, slightly silty from 5 to 6 feet, organic (peat)-rich at base
	8.5 - 15	Limestone	Cream-colored unconsolidated limestone fragments, soft to, loosely packed, from selection well

AMPLE(S) 0-1, 4-5, 14-15 ft WERE ANALYZED (LOG # 15824), ALL OTHER SAMPLES RCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION ROCEDURES WERE USED.

HE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. -1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION RILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

ORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

EOLOGIC LOG

BORE HOLE NUMBER: TB 11 A
(TB 11 failed, hit large piece of wood)

CLIENT: Cliff Berry, Inc.

DRILLING CONTRACTOR: J.M. Hensley Drilling, Inc.

DATE: 12/20/85

LOGGED AND SAMPLED BY: J. Peterson

RMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1 ft	Soil	Light brown-gray limey (?) soil
	1-2.5	Clay	Medium brown compact clay, occasional limestone fragment
	2.5-3	Sand	Medium brown uncompacted medium-grained sand

Hit wood again, no further penetration

[redacted] ft [redacted] ANALYZED (LOG# 15824), ALL OTHER SAMPLES ARCHIVED. [redacted] SAMPLING AND EQUIPMENT DECONTAMINATION PROCEDURES WERE USED.

THE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. D-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION DRILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

BORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED

GEOLOGIC LOG

BORE HOLE NUMBER: TB 12

CLIENT: Cliff Berry, Inc.

DRILLING CONTRACTOR: J. M. Hensley Drilling, Inc.

DATE: 12/20/85

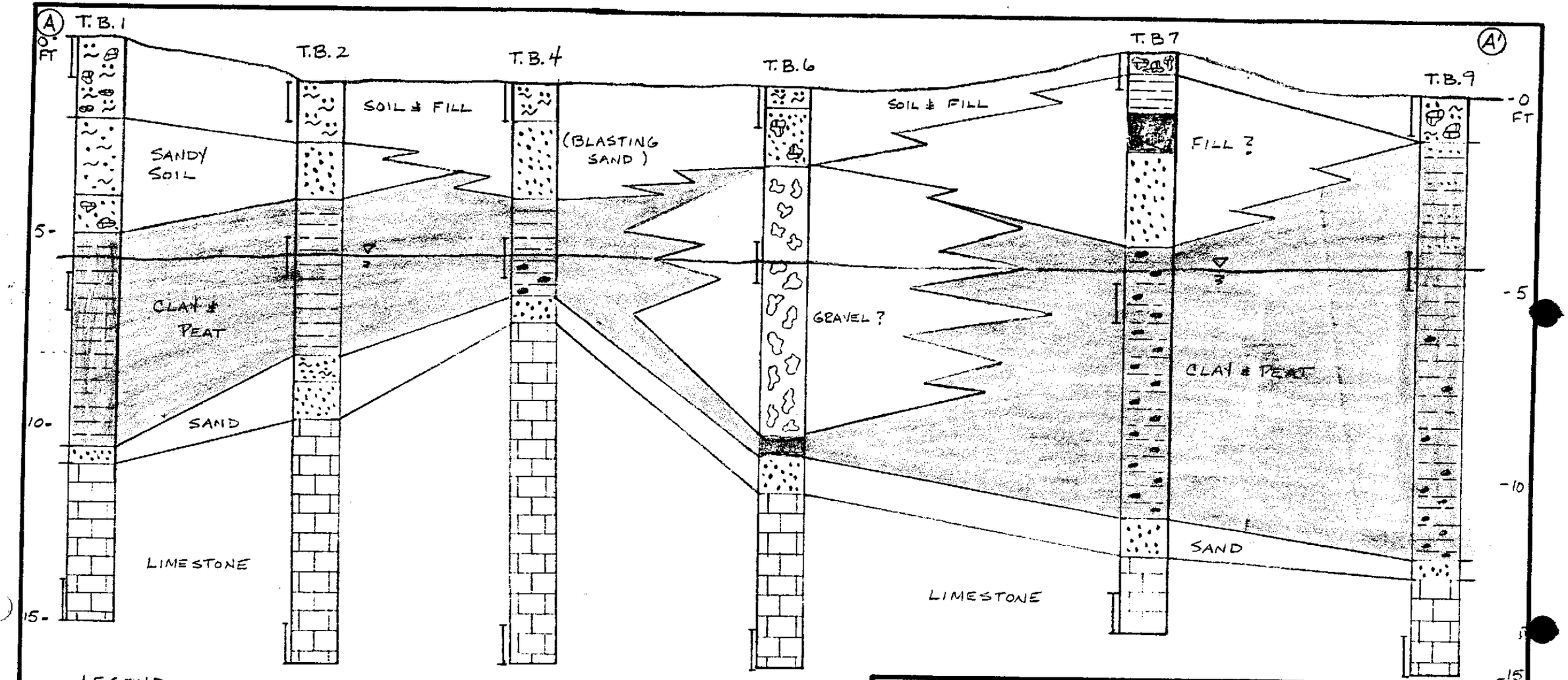
LOGGED AND SAMPLED BY:

RMATION	DEPTH	ROCK TYPE	DESCRIPTION
Recent	0-1 ft	Soil	Dark brown sandy organic soil
	1-3	Concrete	-
	3-9	-	Poor recovery, wood, concrete, dark brown silty clay
	9-10	Clay	Dark brown - gray clay and peat
	10-10.5	Sand	Medium gray medium-grained sand
	10.5-15	Limestone	Light brown to cream unconsolidated limestone fragments from injection well

AMPLE(S) 0-1, 6-7, 14-15ft WERE ANALYZED (LOG# 15824), ALL OTHER SAMPLES ARCHIVED. STANDARD SAMPLING AND EQUIPMENT DECONTAMINATION PROCEDURES WERE USED.

THE ABOVE BORING WAS CONDUCTED IN ACCORDANCE WITH A.S.T.M. D-1586 DRILLING AND SAMPLING PROCEDURE USING PENETRATION DRILLING EQUIPMENT WITH A 140 PILE DRIVEN HAMMER AND 1 1/2" ID 24" LONG SPLIT-SPOON CORING DEVICE

BORING WAS ABANDONED IMMEDIATELY UPON COMPLETION AND BACKFILLED



LEGEND

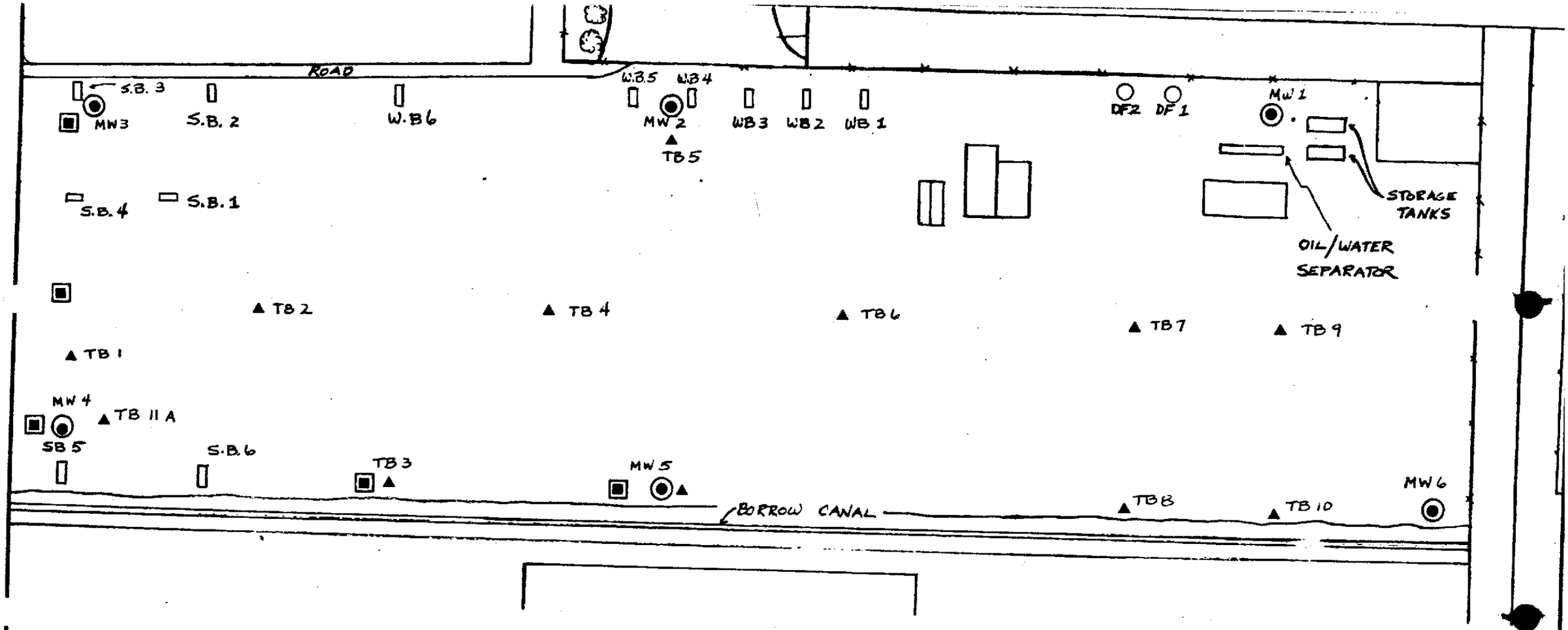
- ORGANIC RICH SOIL
- CLAY (DARK SPOTS PEAT)
- PEAT
- SAND
- LIMESTONE

I INTERVAL SAMPLED

▽ WATER TABLE AT TIME OF SAMPLING

Enviropact, Inc. Environmental Consulting and Analysis

CLIFF BERRY, INC.	SCALE —	DRAWN BY JMP
		REVISED
NORTH - SOUTH CROSS-SECTION, A - A'		
DATE 1-86	APPROVED BY	DRAWING NUMBER FIGURE 2



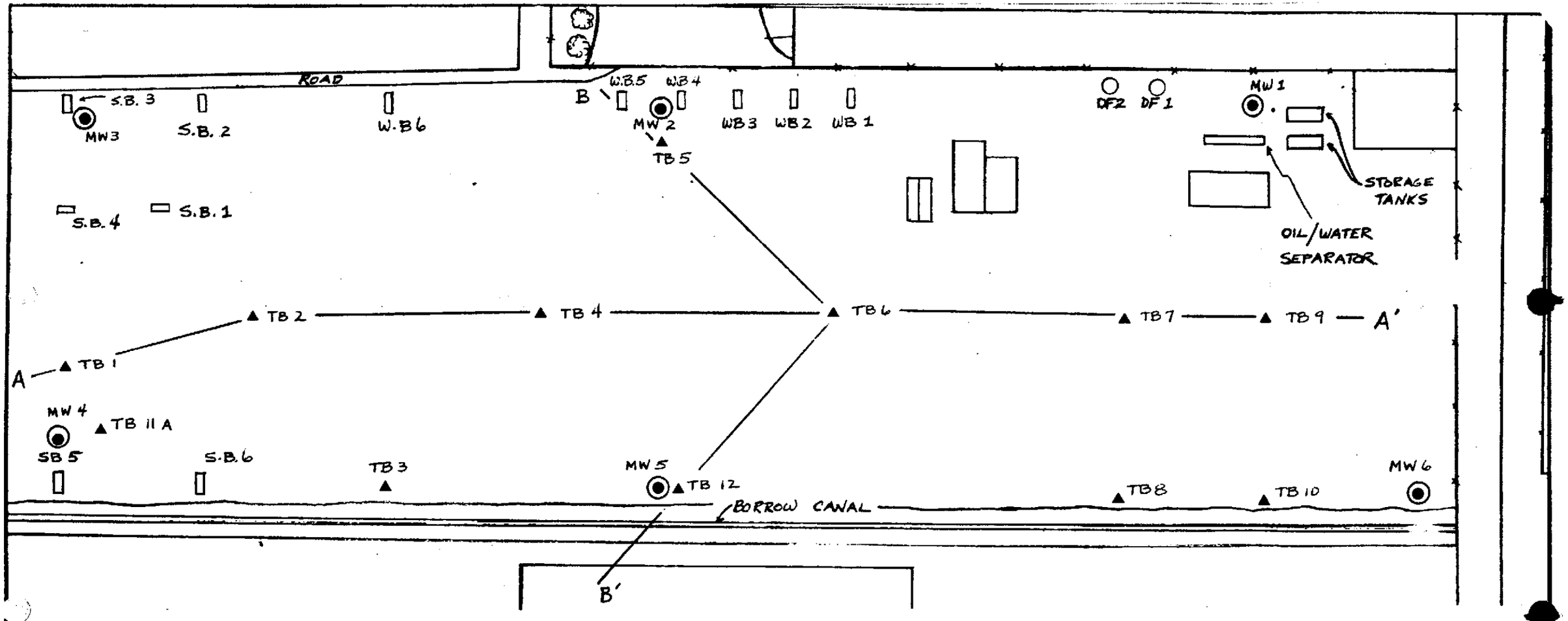
LEGEND

- ◉ MONITORING WELL INSTALLED 1/8-9/86
- ▲ SOIL BORING TAKEN 12/20/85
- ▯ TRENCH SAMPLED 4/85
- ▣ PROPOSED LYSIMETER LOCATION

→ Z

Enviropact. Inc. Environmental Consulting and Analysis

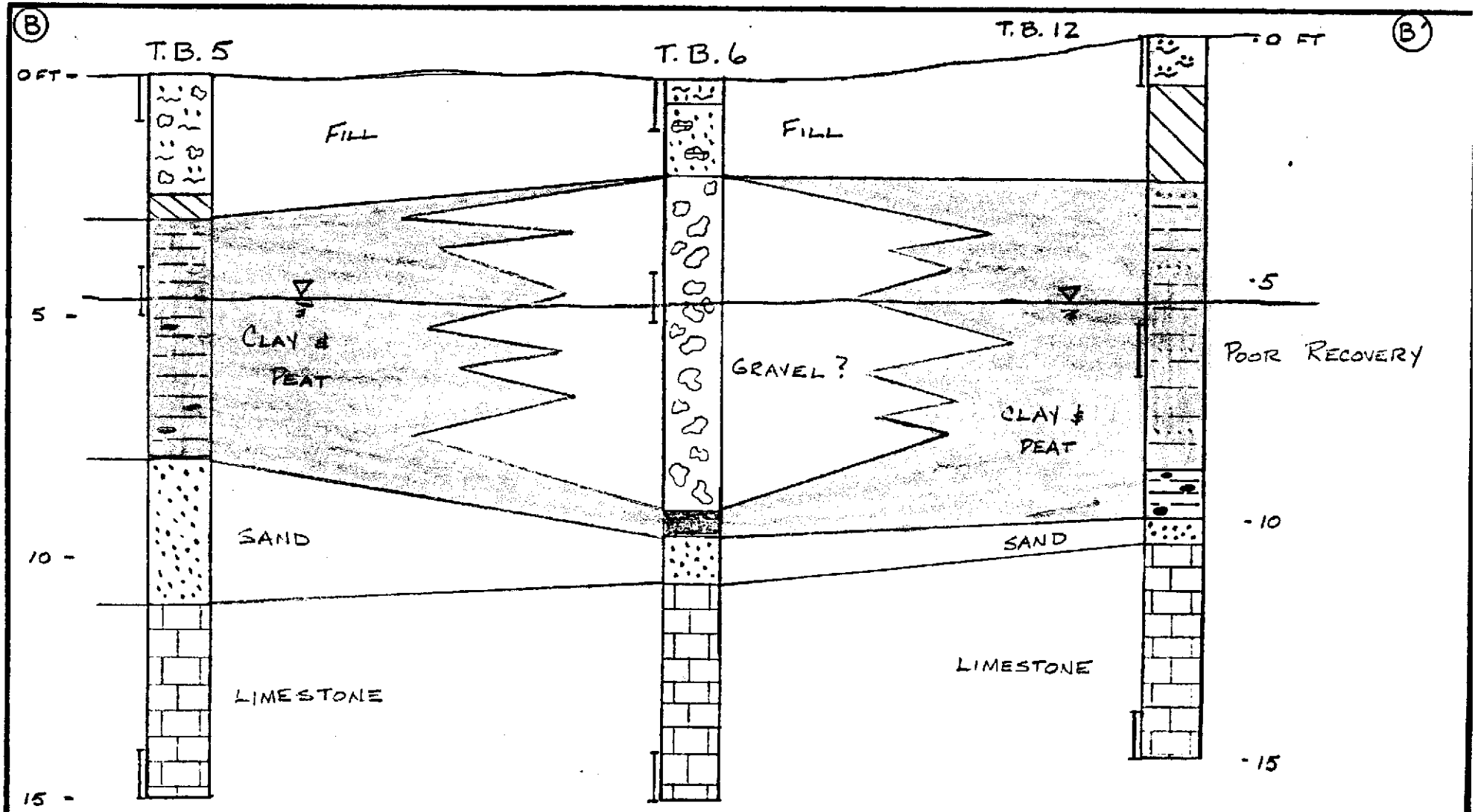
CLIFF BERRY, INC.	SCALE APPROX.: 1" = 100'	DRAWN BY JMP
		REVISED
LOCATIONS OF SAMPLING POINTS		
DATE JAN. '86	APPROVED BY	DRAWING NUMBER FIGURE 4



LEGEND

- ◉ MONITORING WELL INSTALLED 1/8-9/86
- ▲ SOIL BORING TAKEN 12/20/85
- ▯ TRENCH SAMPLED 4/85

Enviropact, Inc. — Environmental Consulting and Analysis		
CLIFF BERRY, INC.	SCALE APPROX.: 1" = 100'	DRAWN BY JMP REVISED
LOCATIONS OF SAMPLING POINTS		
DATE JAN. '86	APPROVED BY	DRAWING NUMBER FIGURE 1

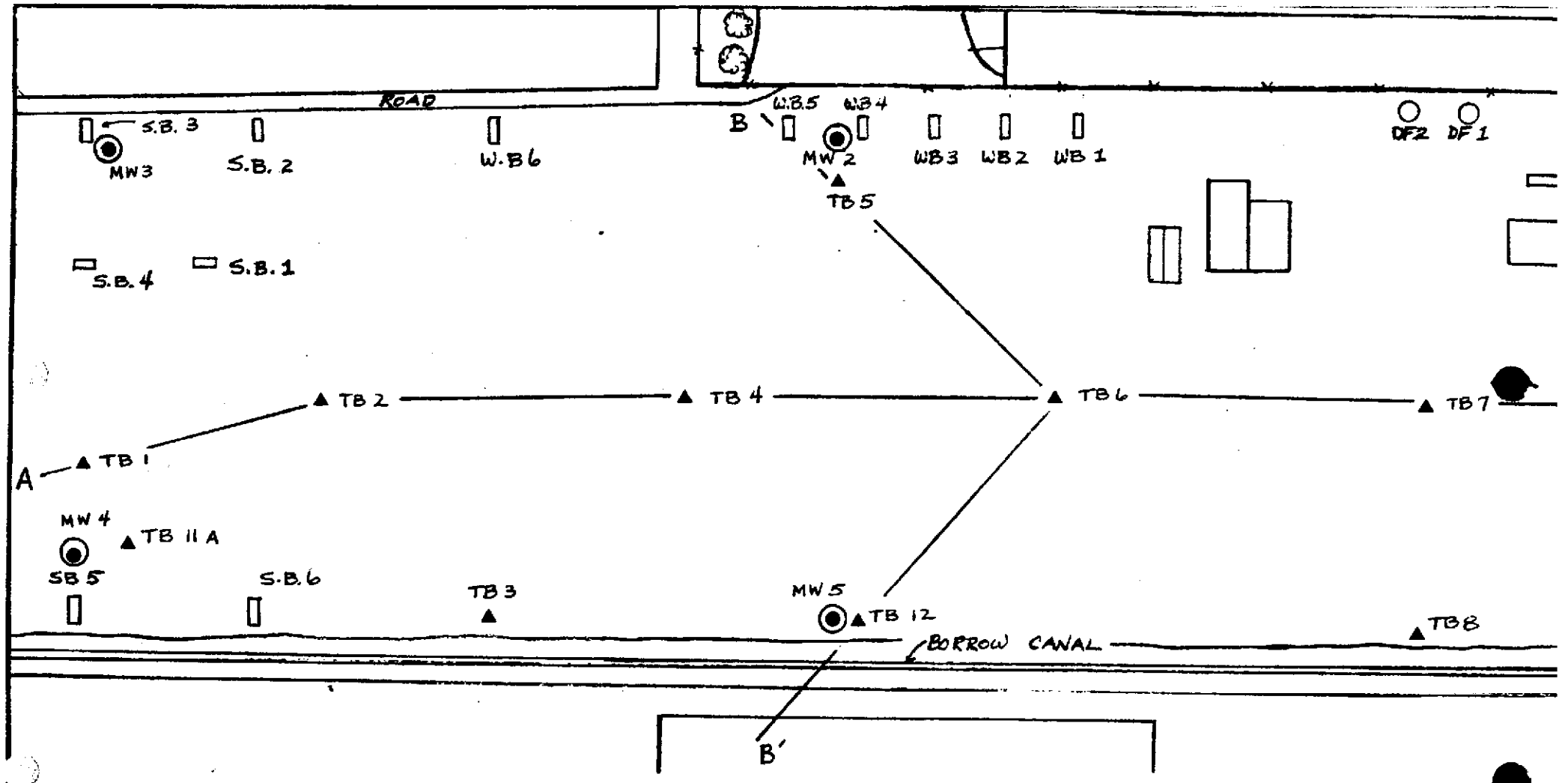


LEGEND

- ORGANIC-RICH SOIL
- CONCRETE
- CLAY (DARK SPOTS PEAT)
- PEAT
- SAND
- LIMESTONE
- INTERVAL SAMPLED
- WATER TABLE AT TIME OF SAMPLING

Enviropact, Inc. Environmental Consulting and Analysis

CLIFF BERRY, INC.	SCALE: -	DRAWN BY: JMP
		REVISED:
EAST-WEST CROSS-SECTION, B-B'		
DATE: 1-86	APPROVED BY:	DRAWING NUMBER: FIGURE 3



LEGEND

- ◉ MONITORING WELL INSTALLED 1/8-9/86
- ▲ SOIL BORING TAKEN 12/20/85
- ▯ TRENCH SAMPLED 4/85

Enviropact. Inc.

CLIFF BERRY, INC.

LOCATIONS OF SAMPLIN

DATE	APPROVED BY
JAN. '86	

LAW OFFICES
COMPTON & ASSOCIATES, P.A.
POST OFFICE BOX 14124
1715 SOUTHEAST 4TH AVENUE
FORT LAUDERDALE, FLORIDA 33302-4124
(305) 763-4747
DADE 949-0420

ROBERT J. COMPTON
ADMIRALTY
PERSONAL INJURY & WRONGFUL DEATH
CORPORATION & BUSINESS LAW
JOHN T. DAVID
GENERAL TRIAL PRACTICE
CORPORATION & BUSINESS LAW
ADMIRALTY
SCOTT M. ROSEN
GENERAL TRIAL PRACTICE

FORT PIERCE/VERO BEACH OFFICE
UNIVEST BUILDING - SUITE 300
2770 NORTH INDIAN RIVER BOULEVARD
VERO BEACH, FLORIDA 32960
(305) 569-9300

REPLY TO

RECEIVED
MAR 10 1986
Dept. of Environmental Reg.
Office of General Counsel

March 5, 1986

RECEIVED
MAR 12 1986
Dept. of Environmental Reg.
West Palm Beach

Douglas M. Wyckoff, Asst. General Counsel
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Re: Berry v. DER

Dear Mr. Wyckoff:

Enclosed herewith please find reports of water quality samples taken from the property on the northern boundary of the Berrys' property which is currently the subject matter of the above styled litigation. This data clearly reflects that the northern property which was of major concern to Dr. Charles Ouseph and Mr. Richard Walesky, does not reflect contamination in excess of DER standards.

As you recall from the depositions taken on December 11, 1985, Dr. Ouseph requested the denial of the subject Permit based upon contamination problems identified on properties surrounding the subject site. Dr. Ouseph's position was that nothing should be permitted until these "surrounding" problems are addressed to his satisfaction. The enclosed data certainly raises the question whether or not there are any "surrounding" problems. In any event, the basis of Dr. Ouseph's opinion does not reasonably justify the legal denial of the Permit on the subject property.

Indeed it appears that from Mr. O'Donnel's deposition, that the Permit was ready to be approved until Mr. Walesky involved Dr. Ouseph in "re-evaluating" the site. In all honestly, it would appear that Mr. Walesky has directed a personal vendetta in the name of the DER to prevent the issuance of this Permit.

Another important factor of which you should be aware, is that it appears from discussions and public meetings of the Broward County Environmental Control Board, that the County has no objection and indeed is completely astonished, by the DER's refusal to issue the Permit in the above referenced matter. Both Terry Lawrence, whom you have listed as an expert witness, and Fran Henderson, have clearly indicated that they have no opposition to the Permit's approval. Indeed, the position of the Broward County Environmental Control Board is that based upon the current development of the Port, and the areas directly surrounding the Berrys' property, the DER's position as to the improvement of the water quality is not only unrealistic but also unwarranted. It is evident from the surrounding circumstances currently existing at the Port, Mr. Berry's planned development of the site would act to enhance the environment instead of damaging the environment as indicated by the Department. In fact, the Broward County Environmental Control Board has acknowledged that if any unacceptable levels of arsenic exist at the site, that they were put there by the DNR in order to fight land crabs many years ago.

It is further evident through aerial photographs dating back to 1956, that this "lake" is a man-made borrow pit created some twenty (20) years ago and has nothing to do with the natural hydrological system of the area. Undoubtedly, under these circumstances, it is questionable whether the DER even has jurisdiction to regulate the development of this site. It appears that under these and other circumstances, this Permit falls squarely within the exceptions enumerated within the Warren Henderson Wetlands Protection Act of 1984 which in effect, obviates the requirement of the Permit for this site. This position is abundantly evident when considered in light of Mary F. Smallwood's article, The Warren S. Henderson Wetlands Protection Act of 1984: A Primer, 1 J. of Land Use & Environmental Law 211 (1985). As I understand, Ms. Smallwood is the Chief Legal Counsel for the Department of Environmental Regulation. Therefore, I am concerned whether Ms. Smallwood knows of and would support, the Department's further prosecution of this matter.

The time has come to set aside the personal differences between the parties and to take a hard look at the factual and legal issues presented in this matter. This matter does not have to, and should not, be litigated further. However, it appears that this is the only action that will satisfy the Department of Environmental Regulation. We have arrived at the point where to continue further with this action will subject some persons in the Department of Environmental Regulation to civil rights actions under 42 USC §1983, for the deprivation of the Berrys' property rights in regard to the subject parcel. I also believe that there is a substantial possibility that the Department may well be liable for attorneys' fees and costs under the Florida Statute Chapter 120.57(1)(b)(9).

Therefore, in an effort to circumvent this type of action, I herein request that the Department of Environmental Regulation reconsider its prior decision and issue the Permit for Mr. & Mrs. Berry to develop their property. In any event, I respectfully request that you contact this office so that we can discuss this matter further. If you do not believe this is feasible, then we will need to discuss such matters in order that we may prepare and resubmit this matter to the Administrative Law Judge.

Thank you for your courtesy and cooperation.

Very truly yours,

John T. David, Esq.

JTD/lw
cc: Mr. & Mrs. Berry

Enviropact, Inc.
Environmental Consulting and Analysis

4790 N.W. 157 Street
Hialeah, Florida 33014
Telephone (305) 620-1700
Fla Watts: (800) 432-9706

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W1		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.09	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	<	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	1	mg/l
PHENOLS, TOTAL	0.03	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W3		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.18	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
PHENOLS, TOTAL	0.03	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact. Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W4		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	0.17	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.11	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	1	mg/l
PHENOLS, TOTAL	0.11	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W5		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.09	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
PHENOLS, TOTAL	0.05	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J. Korn
Laboratory Supervisor
Enviropact, Inc.

Enviropact, Inc.
Environmental Consulting and Analysis

1143

CLIFF BERRY INDUSTRIES
P.O. BOX 13079
FT.LAUDERDALE, FL 33316

January 24, 1986
Report 15962
LAB I.D. 86119

ATT : CLIFF BERRY
Sample Received: 1/13/86
Sample Designation:ANALYSIS AS NOTED

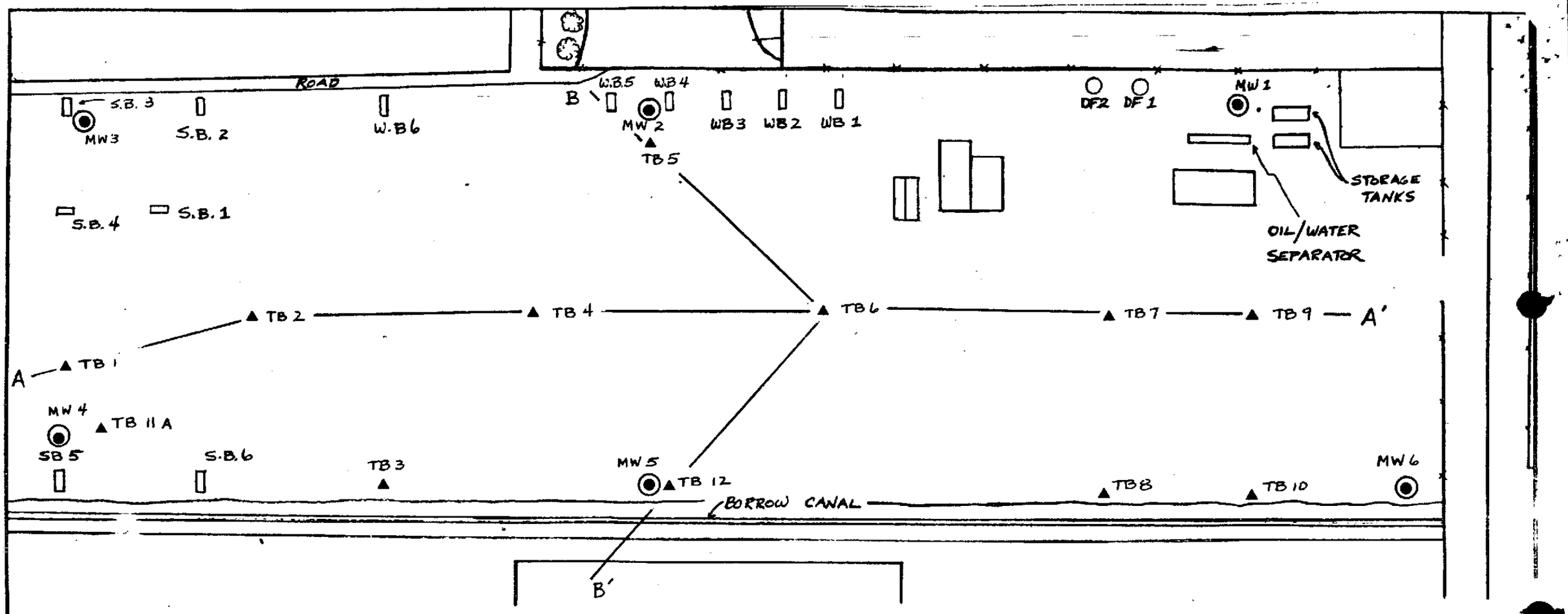
Collected By: M. MONFRIES

REPORT OF ANALYSIS : WELL - W6		UNITS
ARSENIC	< 0.005	mg/l
CADMIUM	< 0.005	mg/l
CHROMIUM, TOTAL	< 0.005	mg/l
LEAD	< 0.005	mg/l
MERCURY	< 1	µg/l
NICKEL	< 0.005	mg/l
POLYCHLORINATED BIPHENYLS	< 1	µg/l
TOLUENE	< 1	µg/l
XYLENE, TOTAL	< 1	µg/l
ZINC	0.16	mg/l
CHLOROBENZENE	< 1	µg/l
1,3-DICHLOROBENZENE	< 1	µg/l
1,2-DICHLOROBENZENE	< 1	µg/l
1,4-DICHLOROBENZENE	< 1	µg/l
BENZENE	< 1	µg/l
ETHYL BENZENE	< 1	µg/l
OIL & GREASE	< 1	mg/l
PHENOLS, TOTAL	0.04	mg/l

Analyses performed in accordance with E.P.A., A.S.T.M., Standard Methods or other approved methods.

Respectfully Submitted,

Lawrence J Korn
Laboratory Supervisor
Enviropact, Inc.



LEGEND

- ◉ MONITORING WELL INSTALLED 1/8-9/86
- ▲ SOIL BORING TAKEN 12/20/85
- ▯ TRENCH SAMPLED 4/85

Enviropact, Inc. — Environmental Consulting and Analysis		
CLIFF BERRY, INC.	SCALE APPROX.: 1" = 100'	DRAWN BY JMP REVISED
LOCATIONS OF SAMPLING POINTS		
DATE JAN. '86	APPROVED BY	DRAWING NUMBER FIGURE 1