SP ENVIRONMENTAL SYSTEMS, INC.

9719 LINCOLN VILLAGE DR., SUITE 310 SACRAMENTO, CA 95827 (916) 369-8971 FAX (916) 369-8370

91 APR 1 PM 3:32

April 1, 1991

Mr. Lawrence Seto
Division of Hazardous Materials
Alameda County Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

SUBJECT: Transmittal of Report
Southern Pacific Transportation Company
Adjacent to Curoco Property
536 Cleveland Street
Albany, California
SPEvS Project No. 05294

Dear Mr. Seto:

On behalf of Southern Pacific Transportation Company (SPTCo), SP Environmental Systems, Inc. (SPEvS) is submitting the enclosed report for the site remediation conducted on the SPTCo right-of-way located adjacent to Curoco Steel Systems property at 536 Cleveland Street in Albany, California.

Two copies of the above referenced report are enclosed for your review. If you have questions regarding this report, or wish to discuss this information in greater detail, please do not hesitate to call Ms. Patricia Curl at your earliest convenience at (916) 369-8971.

Sincerely,

Patricia Curl
Assistant Project Manager

Mark S. Dockum, R.G.
Project Manager

Enclosures

cc: Mr. David Long, Esq. (without enclosure)
Mr. Ron Mayo

SOUTHERN PACIFIC TRANSPORTATION COMPANY
ADJACENT TO CUROCO PROPERTY
536 CLEVELAND STREET
ALBANY, CALIFORNIA

SPEvS Project No. 05294

Prepared for:

Southern Pacific Transportation Co.

One Market Plaza
San Francisco, California 94105

Prepared by:

SP Environmental Systems, Inc.

9719 Lincoln Village Dr., Suite 310
Sacramento, California 95827

March 28, 1991

A report prepared for:

Southern Pacific Transportation Company
One Market Plaza
San Francisco, CA 94105

SOUTHERN PACIFIC TRANSPORTATION COMPANY
ADJACENT TO CUROCO PROPERTY
536 CLEVELAND STREET
ALBANY, CALIFORNIA

Project No. 05294

Prepared by:

Patricia Curl
Project Hydrologist

Mark S. Dockum, R.G.
Project Manager

QA/QC by:

Todd A. Hook, P.E.
Project Manager

SP Environmental Systems, Inc.
9719 Lincoln Village Drive, Suite 310
Sacramento, California 95827
(916) 369-8971

March 28, 1991

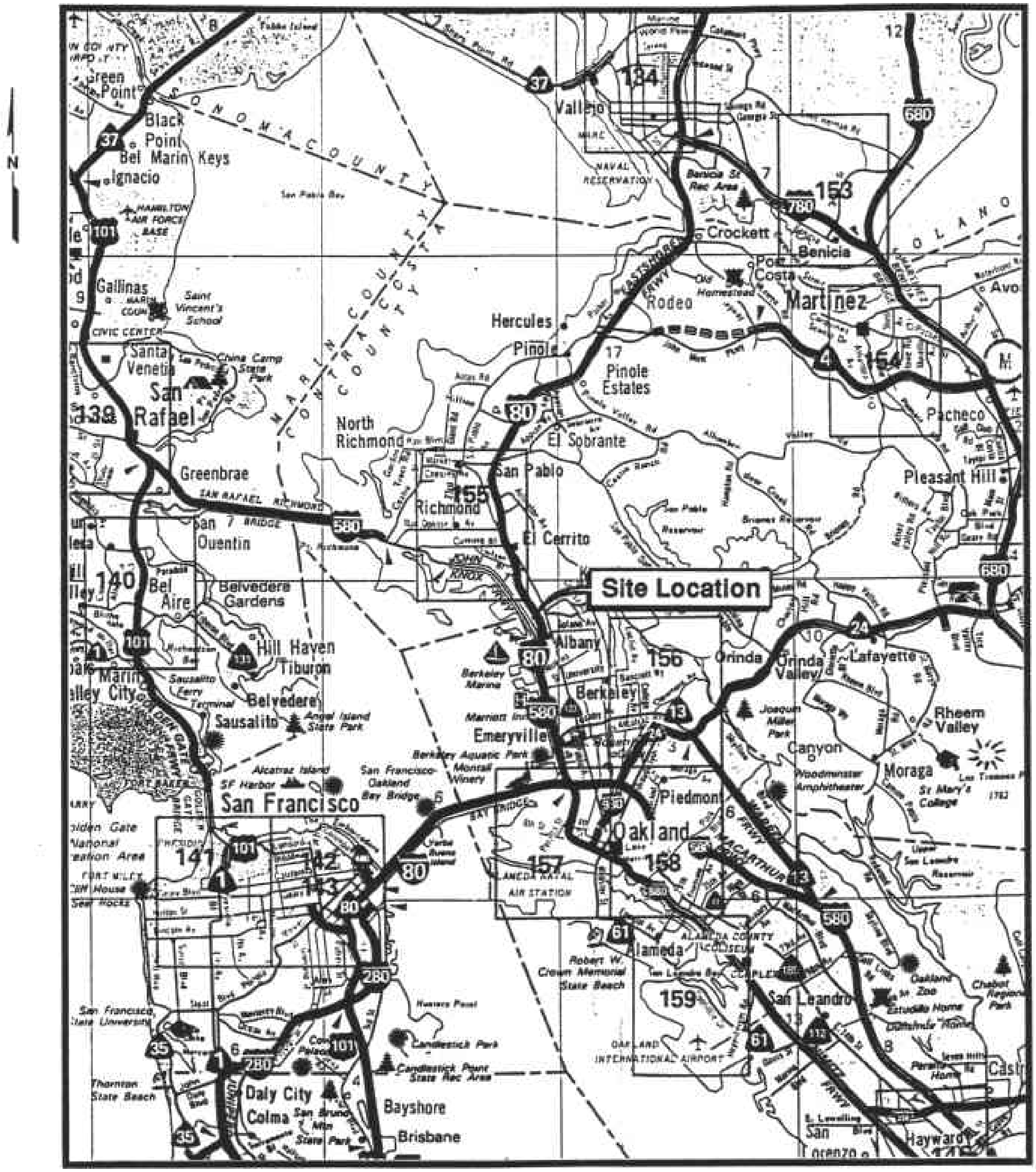
TABLE OF CONTENTS

1.0 INTRODUCTION

This report summarizes the excavation activities performed by SP Environmental Systems, Inc. (SPEvS) on Southern Pacific Transportation Company (SPTCo) property adjacent to Curoco Steel Systems in Albany, California. The property location is shown on Figure 1.

Approximately 200 cubic yards (cy) of soil had been excavated to approximately 18 inches below ground surface (BGS) on SPTCo and Curoco Steel Systems (Curoco) property by Curoco's contractor (SITE, Inc.) during Curoco's site remediation project. Curoco's site remediation project was performed to remediate metals impacted soil and was conducted under Alameda County Health Agency oversight. During excavation activities, a corrugated metal pipe (CMP) containing soil and oily sludge was uncovered on the SPTCo right-of-way by SITE, Inc. The CMP was observed to be in poor condition. Several small areas of ponded water near the pipe had a thin oil sheen, and soil along the pipe was visibly stained in places.

SPEvS responded to remediate the area where the CMP was discovered.



Reference:
Thomas Bros. Map of California, 1990

APPROXIMATE SCALE
0 5 miles

SP ENVIRONMENTAL SYSTEMS, INC.		SITE LOCATION MAP SOUTHERN PACIFIC TRANSPORTATION CO. ADJACENT TO CUROCO PROPERTY ALBANY, CALIFORNIA	FIGURE: 1
PROJECT NO: 05294	DATE: 03/14/91		SCALE: as shown
DRAWN BY: PD	CHECKED BY: PC		

05294 Fig 1/hand/SITE REM RPT 0391

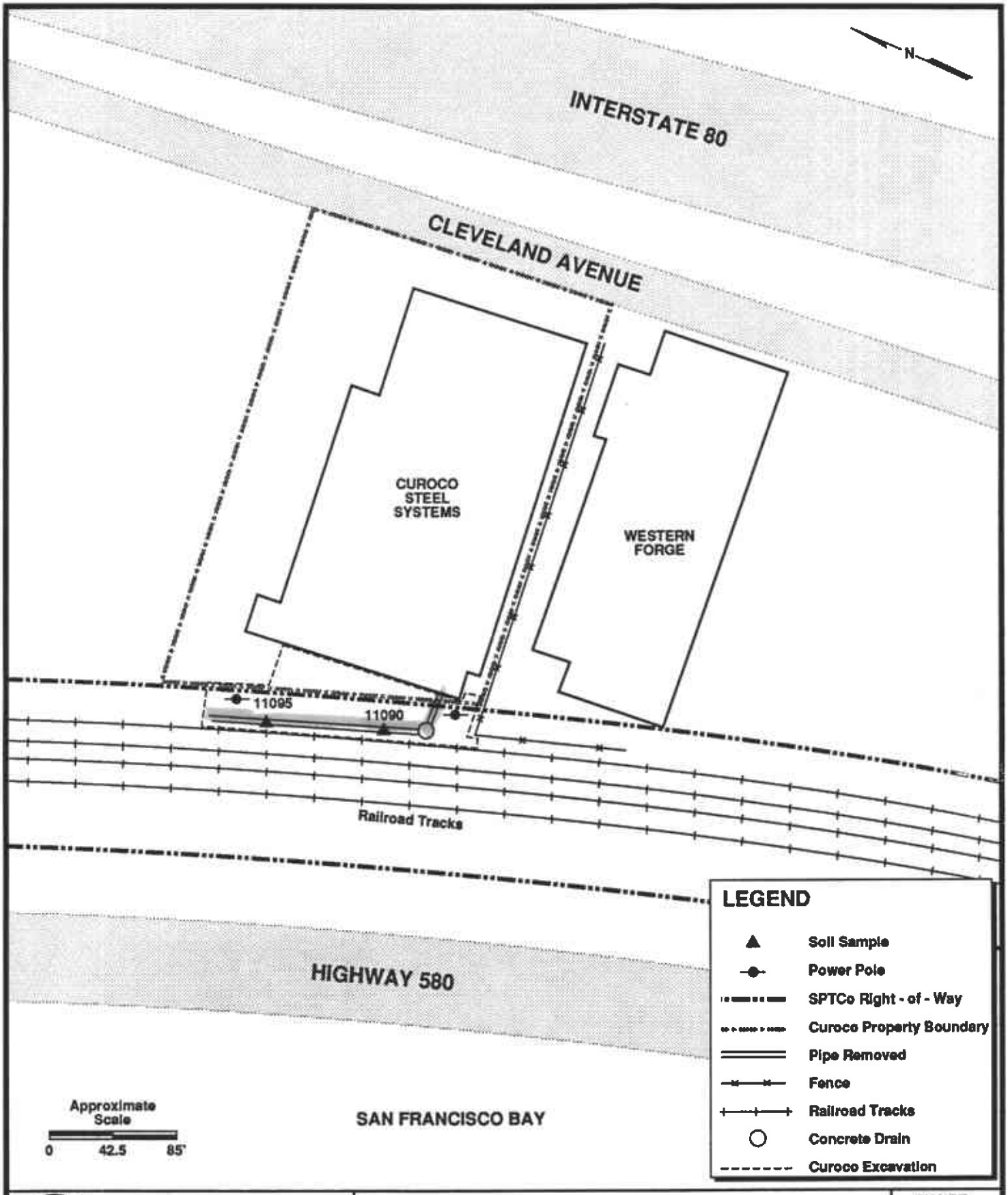
2.0 FIELD ACTIVITIES

A site visit was performed by SPEvS on February 1, 1991, at the Curoco Steel Systems property located at 536 Cleveland Street in Albany, California. The Curoco property is adjacent to SPTCo property (Figure 2).

At the time of SPEvS' visit, SITE Inc., (a hazardous waste subcontractor) was conducting, on behalf of Curoco, onsite treatment of metals-impacted soil (primarily lead, zinc, and chromium) using a chelation treatment method. The metals had apparently originated from previous sand-blasting activities conducted by Curoco. Approximately 200 cy of soil had been excavated to approximately 18 inches BGS on Curoco and SPTCo property (appropriate right-of-entry onto SPTCo property had been acquired by SITE, Inc.). During excavation, a corrugated metal pipe (CMP) containing soil and apparently an oily sludge was uncovered on the SPTCo right-of-way. After removal of the pipe, the overlapping seams of the corrugated metal showed wide gaps and holes were observed in the pipe. Several small areas of ponded water near the pipe had a thin oil sheen, and soil along the pipe was visibly stained in places. Ground water at the site is approximately one to two feet below grade. This property is located approximately 100 yards east of the San Francisco Bay.

Heavy rains on February 2 and 4, 1991, resulted in the formation of a small pond submerging the pipe. A thin film of oil (apparently originating from the pipe) formed on the water of the small pond. SITE, Inc., was contracted by SPEvS to perform emergency response at the site. Abatement of the oil from the water was performed with the use of absorbent booms and pads.

During the period of February 13 through 15, 1991, soil around and covering the drain pipe was excavated. Visibly affected soil was placed on plastic. The water from the excavation was pumped into two 25,000-gallon portable tanks for temporary storage onsite in order to expose the oil-containing pipe. It was then discovered that, at the south end of the property, the pipe is located under the Curoco warehouse and runs toward the railroad tracks and into a concrete drain.



SP ENVIRONMENTAL SYSTEMS, INC.

PROJECT NO: 05294	DATE: 03/08/91
DRAWN BY: PD	CHECKED BY: PC

SITE PLAN
SOUTHERN PACIFIC TRANSPORTATION CO.
ADJACENT TO CUROCO PROPERTY
ALBANY, CALIFORNIA

FIGURE: 2

SCALE: as shown

05294 Fig 2/disc 8/SITE REM RPT 0391

From there the pipe continues northward for approximately 150 feet, parallel to the railroad tracks on the SPTCo right-of-way. The pipe appears to be part of an old drainage system for the area. The portion of the pipe that was removed was approximately two-thirds full of clay soil and oily sludge. The northern extent of the pipe was not excavated. The pipe and contents were then removed from the excavation by means of a backhoe and immediately placed on plastic. The plastic, pipe, soil, and used absorbent booms and pads were then placed into roll-off bins for later disposal. Visibly affected soil was removed from the sides and bottom of the excavation and placed in the roll-off bins. Approximately 36 cy of soil and pipe were excavated. The ends of the remaining pipe were capped with concrete and remained undisturbed. The south end of the pipe at the Curoco building contained a small amount of soil and sludge. The north end of the pipe where it was capped with concrete contained a small amount of soil and sludge. Several gallons per minute of water was flowing from this end of the pipe into the excavation before it was capped. The location of the pipe further northward is unknown.

Mr. Lawrence Seto of the Alameda County Health Agency met with Ms. Patricia Curl of SPEvS, Mr. Ron Mayo of Curoco, Dr. Robert Ellgas of Environ, and Mr. Shawn Sabharwal of SITE, Inc., on March 1, 1991, to discuss the field activities performed at the Curoco and SPTCo properties. Mr. Seto requested a report be submitted by SPEvS documenting field activities, laboratory results, and waste disposal.

2.1 Sampling Locations and Procedures

One oily sludge sample was collected on February 4, 1991, by Environ (contractor to Curoco) on behalf of SPEvS. The sample (Env-1) was collected from the oily sludge inside the pipe and was analyzed for PCBs.

Two oil and two water samples were collected by SITE, Inc. (SITE-1 through SITE-4) on February 7, 1991, on behalf of SPEvS. The oil samples were collected from the floating oil on the ponded water and the water samples were collected from under the oil. All four samples were analyzed for PCBs.

A total of three soil samples (11090, 11095, 001) and one water sample (002) were collected by SPEvS on February 15, 1991. Samples 11090 and 11095 were collected from the native soil below the pipe where the pipe parallels the railroad tracks. Samples 11090 and 11095 were analyzed for total petroleum hydrocarbons (TPH). The samples were collected at approximately 3 feet BGS. The soil under the pipe was thick blue-green clay. No oil or odors were observed. Sample 001 was collected from the water in one of the storage tanks on February 21, 1991, and was analyzed for TPH, PCBs and metals. Sample 002 was collected on February 21, 1991, from the oily sludge inside the pipe after it had been put inside the roll-off bin and was analyzed for TPH, PCBs, and metals. The locations of sample 11090 and 11095 and the removed CMP are shown on Figure 2.

Upon selecting the sampling locations, each sample was obtained by the following procedures:

- A sample of undisturbed oily sludge (Env-1) was collected from inside the CMP by Environ and placed into an 8-oz. glass jar. Two oil samples were collected (SITE-1 and SITE-2) from the oil layer on the surface of the ponded water by SITE, Inc. Two water samples (SITE-3 and SITE-4) were collected from the ponded water. All four samples were collected by dipping a glass jar into the ponded water or oil.

- The backhoe was used to excavate a portion of soil beneath the former pipe location for samples 11090 and 11095. A sample of undisturbed soil was collected from the backhoe bucket and placed into an 8-oz. glass jar.

- Sample 001 was collected from the water inside the tank by lowering a disposable bailer into the tank. The collected water was poured from the bailer into three 16 oz. amber glass bottles and one 500 ml plastic bottle.

- Sample 002 was collected from inside the pipe after the pipe was removed and placed in the roll-off bin for disposal.

All samples, including those collected by Environ and SITE were labeled, logged on a chain-of-custody form, and stored in an iced cooler until delivery to a state-certified analytical laboratory.

Sample Env-1 was analyzed for PCBs (EPA Method 8080) by Curtis & Tompkins, LTD., Analytical Laboratories in Berkeley, California. Samples SITE-1, SITE-2, SITE-3, and SITE-4 were analyzed for PCBs (EPA Method 608) by Anametrix in San Jose, California.

Samples 11090 and 11095 were analyzed for total petroleum hydrocarbons (TPH) by EPA Method 8015 Modified (extractables). Samples 001 and 002 were analyzed for TPH by EPA Method 8015 modified, PCBs by EPA Method 8080 for soil and by Method 608 for water, and for California Code of Regulations (C.C.R.) Title 22 protocol metals. All analyses performed on samples 11090, 11095, 001, and 002 were analyzed by Enseco, Inc. in Sacramento, California.

3.0 ANALYTICAL RESULTS

Analytical results of sample Env-1 indicated PCB concentrations (Aroclor 1254) of 2.0 mg/kg in the oily sludge. Analytical results from oil samples SITE-1 and SITE-2 indicated PCB concentrations of 39 ug/l and 17 ug/l (Aroclor 1254), respectively. The analytical results from water samples SITE-3 and SITE-4 indicated PCB concentrations below laboratory detection limits.

Analytical results of samples 11090 and 11095 from the native soil below the pipe did not detect TPH concentrations above laboratory detection limits in either sample. The analytical results from water sample 001 did not indicate any constituent to be above laboratory detection limits. The analytical results from sludge sample 002 indicated TPH concentrations of 230 mg/kg as diesel and PCB concentrations not above laboratory detection limits. Metals were detected in sample 002, the highest of these concentrations were lead of 62 mg/kg, chromium of 103 mg/kg, and zinc of 676 mg/kg.

Analytical results are summarized in Table 1 and laboratory data sheets are included as Appendix A.

TABLE 1
Summary of Analytical Results
SOUTHERN PACIFIC TRANSPORTATION COMPANY
Adjacent to Curoco Property
536 Cleveland Street, Albany, California
February 4 - 21, 1991
SPEvS Project No. 05294

SAMPLE #	SAMPLE LOCATION	TPH[d]	PCBs[e]	METALS[f]														
				Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Tl	V	Zn
Env-1[a]	Oil from inside pipe	NA	20 mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SITE-1[b]	Oil on north pond	NA	38 ug/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SITE-2[b]	Oil on south pond	NA	16 ug/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SITE-3[b]	Ponded water	NA	<1.1 ug/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SITE-4[b]	Ponded water	NA	<1.1 ug/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
001[c]	Water from tank	<0.10 mg/l	<5.0 ug/l	<1	<.5	<5	<.05	<.05	<.5	<5	<2	<.5	<30	<2	<.2	<.5	<2	<2	<20
002[c]	Oily sludge from inside pipe	230 mg/kg	<50 ug/kg	<10	47.0	139	<.75	<1.0	103	<80	61.6	62.0	350	147	<10	<5	<50	38.7	676
11090[c]	Soil under south end of pipe	<1.0 mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11095[c]	Soil under north end of pipe	<1.0 mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

< Symbol indicates below method detection as listed.
NA Not Analyzed.

a Sample collected by Environ. Laboratory report included in Appendix A.
b Sample collected by SITE, Inc. Laboratory report included in Appendix A.
c Sample collected by SPEvS. Laboratory reports included in Appendix A.
d Total Petroleum Hydrocarbons (TPH) analyzed by EPA Method 8015 utilizing gas chromatography/flame ionization detector (GC/FID) procedures.
e Polycholorinated biphenyls (PCBs) analyzed by EPA Method 8080 for soil and Method 608 for water.
f Metals analyzed by California Code of Regulations (C.C.R.) Title 22 Protocol. Results are shown as mg/l for water and mg/kg for soil.

Sb = Antimony
As = Arsenic
Ba = Barium
Be = Beryllium
Cd = Cadmium
Cr = Chromium
Co = Cobalt
Cu = Copper
Pb = Lead
Mo = Molybdenum
Ni = Nickel
Se = Selenium
Ag = Silver
Tl = Thallium
V = Vanadium
Zn = Zinc

4.0 DISPOSAL ACTIVITIES

The City of Albany, Alameda County Health Agency, and the Regional Water Quality Control Board (San Francisco Bay Region) were contacted regarding the requirements for discharging the approximately 35,000 gallons of water stored in two onsite tanks. All three agencies stated that if the analytical results indicated all constituents to be below detection limits, then no permits were required and the water could be discharged to the storm sewer. The analytical results from water sample 001 indicated all constituents to be below detection limits; therefore, the water was discharged on February 27, 1991, into the nearby storm sewer. The remaining sediment in the bottom of the tanks was cleaned out and put into the roll-off bins for disposal with the soil, sludge, and CMP.

The CMP, contents of the CMP, and underlying soil were removed for disposal. Approximately 36 cy of soil, sludge, CMP, and used absorbent booms and pads were transported in 3 roll-of-bins on March 7, 1991 under manifest by Erickson, Inc., to Chemical Waste Management's (CWM) Kettleman Hills landfill in Kettleman City, California. The contents of the roll-of-bins were manifested as non-hazardous waste. The bins were sent to the Kettleman Hills landfill because CWM could accept the bins sooner and at a lower cost than Class II landfills in the area. Copies of the manifests for the 3 roll-off bins transported to the landfill are included as Appendix B.

The excavation was partially backfilled with gravel during excavation activities to allow access to areas of the site. It is SPEvS' understanding that Curoco will complete site closure activities as part of its site remediation program which will include backfill compaction to 90% and asphalt pavement.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The CMP removed from the site appeared to be part of an old drainage system for the Albany area. SPEvS believes that the oil in the pipe most likely originated from one or more of the industrial business adjacent to the railroad right-of-way and not from SPTCo operations. The SPTCo property at this location is a right-of-way for four railroad tracks. No other SPTCo operations are conducted at this location.

Very low levels of PCBs were detected in one of the two samples from inside the CMP and from the two oil samples. The affected soils and oil were transported and disposed at the Chemical Waste Management landfill in Kettleman City, California. None of the water samples collected had detectable levels of PCBs, TPH, or metals. The analytical results also indicated that soils underlying the pipe do not contain TPH concentrations above laboratory detection limits.

Analytical results indicate that the remediation of the portion of the SPTCo right-of-way adjacent to the Curoco property is complete. Curoco will complete site backfilling and asphalting of the Curoco and SPTCo properties. Therefore, SPEvS recommends no further action for this portion of the SPTCo property.

APPENDIX A

LABORATORY REPORTS

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

MR. SHAWN SABHARWAL
SITE
1240 BAYSHORE HIGHWAY, SUITE 305
BURLINGAME, CA 94010

Workorder # : 9102068
Date Received : 02/06/91
Project ID : ~~67007~~ 2400
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9102068- 1	001 SITE-1
9102068- 2	002 SITE-2
9102068- 3	003 SITE-3
9102068- 4	004 SITE-4

This report consists of 8 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Burt Sutherland for
Burt Sutherland
Laboratory Director

2-11-91
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. SHAWN SABHARWAL
SITE
1240 BAYSHORE HIGHWAY, SUITE 305
BURLINGAME, CA 94010

Workorder # : 9102068
Date Received : 02/06/91
Project ID : ~~67007~~ 2708
Purchase Order: N/A
Department : GC
Sub-Department: PEST

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9102068- 1	001 SITE-1	WATER	02/06/91	8080 PCB
9102068- 2	002 SITE-2	WATER	02/06/91	8080 PCB
9102068- 3	003 SITE-3	WATER	02/06/91	8080 PCB
9102068- 4	004 SITE-4	WATER	02/06/91	8080 PCB

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. SHAWN SABHARWAL
SITE
1240 BAYSHORE HIGHWAY, SUITE 305
BURLINGAME, CA 94010

Workorder # : 9102068
Date Received : 02/06/91
Project ID : ~~67007~~ 2704
Purchase Order: N/A
Department : GC
Sub-Department: PEST

QA/QC SUMMARY :

-The surrogate recoveries for samples 003 and 004 were outside control limits due to the extensive acid clean up.
Also, the surrogate recovery for sample 001 was outside control limits due to matrix interference.

Stratos Dimos 2-11-91
Department Supervisor Date

Stephanie N Tran 2-11-91
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 608/8080
ANAMETRIX, INC. (408)432-8192

Project ID : ~~67007~~ 2405
Sample ID : 001
Matrix : WATER
Date Sampled : 2/ 6/91
Date Extracted : 2/ 6/91
Amount Extracted : 750.0 mL
Date Analyzed : 2/ 7/91
Instrument ID : HP 5

Anametrix ID : 9102068-01
Analyst : G
Supervisor : SD

Dilution Factor : 5.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
12674-11-2	Aroclor-1016	3.3	ND	U
11104-28-2	Aroclor-1221	3.3	ND	U
11141-16-5	Aroclor-1232	3.3	ND	U
53469-21-9	Aroclor-1242	3.3	ND	U
12672-29-6	Aroclor-1248	3.3	ND	U
11097-69-1	Aroclor-1254	6.7	38.	
11096-82-5	Aroclor-1260	6.7	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 608/8080
ANAMETRIX, INC. (408)432-8192

Project ID : ~~67007~~ 2700
Sample ID : 002
Matrix : WATER
Date Sampled : 2/ 6/91
Date Extracted : 2/ 6/91
Amount Extracted : 800.0 mL
Date Analyzed : 2/ 7/91
Instrument ID : HP 5

Anametrix ID : 9102068-02
Analyst : [illegible]
Supervisor : SD

Dilution Factor : 3.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
12674-11-2	Aroclor-1016	1.9	ND	U
11104-28-2	Aroclor-1221	1.9	ND	U
11141-16-5	Aroclor-1232	1.9	ND	U
53469-21-9	Aroclor-1242	1.9	ND	U
12672-29-6	Aroclor-1248	1.9	ND	U
11097-69-1	Aroclor-1254	3.7	16.	
11096-82-5	Aroclor-1260	3.7	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 608/8080
ANAMETRIX, INC. (408)432-8192

Project ID : ~~67007~~ 2400
Sample ID : 003
Matrix : WATER
Date Sampled : 2/ 6/91
Date Extracted : 2/ 6/91
Amount Extracted : 950.0 mL
Date Analyzed : 2/ 7/91
Instrument ID : HP 5

Anametrix ID : 9102068-03
Analyst : [illegible]
Supervisor : [illegible]

Dilution Factor : 1.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
12674-11-2	Aroclor-1016	.53	ND	U
11104-28-2	Aroclor-1221	.53	ND	U
11141-16-5	Aroclor-1232	.53	ND	U
53469-21-9	Aroclor-1242	.53	ND	U
12672-29-6	Aroclor-1248	.53	ND	U
11097-69-1	Aroclor-1254	1.1	ND	U
11096-82-5	Aroclor-1260	1.1	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 608/8080
ANAMETRIX, INC. (408)432-8192

Project ID : ~~67007~~ 2422
Sample ID : 004
Matrix : WATER
Date Sampled : 2/ 6/91
Date Extracted : 2/ 6/91
Amount Extracted : 950.0 mL
Date Analyzed : 2/ 7/91
Instrument ID : HP 5

Anametrix ID : 9102068-04
Analyst : ST
Supervisor : SD

Dilution Factor : 1.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
12674-11-2	Aroclor-1016	.53	ND	U
11104-28-2	Aroclor-1221	.53	ND	U
11141-16-5	Aroclor-1232	.53	ND	U
53469-21-9	Aroclor-1242	.53	ND	U
12672-29-6	Aroclor-1248	.53	ND	U
11097-69-1	Aroclor-1254	1.1	ND	U
11096-82-5	Aroclor-1260	1.1	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 608/8080
ANAMETRIX, INC. (408)432-8192

Project ID : ~~67007~~ 2400
Sample ID : BLANK
Matrix : WATER
Date Sampled : 0/ 0/ 0
Date Extracted : 2/ 6/91
Amount Extracted : 1000.0 mL
Date Analyzed : 2/ 7/91
Instrument ID : HP 5

Anametrix ID : PWBLK020691
Analyst : [illegible]
Supervisor : SD

Dilution Factor : 1.00
Conc. Units : UG/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
12674-11-2	Aroclor-1016	.50	ND	U
11104-28-2	Aroclor-1221	.50	ND	U
11141-16-5	Aroclor-1232	.50	ND	U
53469-21-9	Aroclor-1242	.50	ND	U
12672-29-6	Aroclor-1248	.50	ND	U
11097-69-1	Aroclor-1254	1.0	ND	U
11096-82-5	Aroclor-1260	1.0	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 608/8080
ANAMETRIX, INC. (408)432-8192

Project ID : ~~27007~~ 2400
Matrix : WATER

Anametrix ID : 9102068
Analyst : [illegible]
Supervisor : SD

	SAMPLE ID	SU1	TOTAL OUT
1	BLANK	98	0
2	003	27 *	1
3	004	28 *	1
4	001	296 *	1
5	002	96	0
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

	QC LIMITS
SU1 = DBC	(43-146)

* Values outside of Anametrix QC limits

EHRT
Environmental Health Research and Testing, Inc.
1240 Bayshore Highway, Suite 305
Burlingame, California 94010

CHAIN OF CUSTODY RECORD

APR-02-1991 00:49 FROM TO 19163698370 P.02

PROJECT NO.: 67007

SAMPLERS: (Signature) Pat T. McGill

PROJECT NAME / CROSS STREET: Conoco Heavy Metal

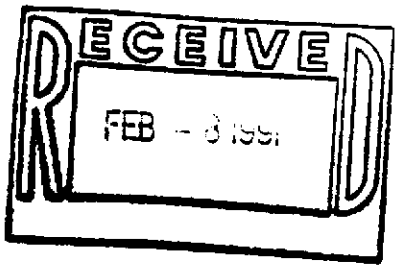
ANALYSES: 8608 PCB only Per Dave Boyden

STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NUMBER OF CONTAINERS	8608 PCB only					REMARKS
001	2/6	1:00			North Field Surface oil	1						
002	2/6	1:00			Conoco Surface oil	1						
003	2/6	1:00			Conoco Lower Water	1						
004	2/6	1:00			Conoco Lower Water	1						

RELINQUISHED BY: (Signature)	DATE: / TIME:	RECEIVED BY: (Signartue)	RELINQUISHED BY: (Signature)	DATE: / TIME:	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE: / TIME:	~~RECEIVED BY~~: (Signartue)	RELINQUISHED BY: (Signature)	DATE: / TIME:	RECEIVED BY: (Signature)
RELINQUISHED BY COURIER: (Sign.)	DATE: / TIME:	RECEIVED BY MOBILE LAB: (Sign.)	RELINQ. BY MOBILE LAB: (Signatue)	DATE: / TIME:	RECEIVED BY COURIER: (Signature)
METHOD OF SHIPMENT		SHIPPED BY: (Signatue) [signature]	RECEIVED FOR LAB: (Signature) [signature]	DATE: 02/06/91 / TIME: 20:15	COURIER FROM AIRPORT: (Signature)

TOTAL P.02

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900



DATE RECEIVED: 02/04/91
DATE REPORTED: 02/05/91

LAB NUMBER: 102914

CLIENT: ENVIRON

REPORT ON: 1 WASTE SAMPLE

PROJECT ID: 03-1332D
LOCATION: CUROCO

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LAB NUMBER: 102914
CLIENT: ENVIRON
PROJECT: 03-1332D/CUROCO
SAMPLE ID: SLUDGE ON FEB 4

DATE RECEIVED: 02/04/91
DATE EXTRACTED: 02/04/91
DATE ANALYZED: 02/05/91
DATE REPORTED: 02/05/91

==========

POLYCHLORINATED BIPHENYLS (PCBs)
ANALYSIS METHOD: EPA 8080
EXTRACTION METHOD: EPA 3580

==========

AROCLOR TYPE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)
AROCLOR 1221	ND	1.0
AROCLOR 1232	ND	1.0
AROCLOR 1016	ND	1.0
AROCLOR 1242	ND	1.0
AROCLOR 1248	ND	1.0
AROCLOR 1254	2.0	1.0
AROCLOR 1260	ND	1.0

ND = Not detected at or above reporting limit.

ENVIRON

Counsel in Health and Environmental Science

CHAIN-of-CUSTODY FORM

Sheet 1 Of 1
5820 Shellmound St, Suite 700
Emeryville, California 94608
(415) 655-7400

PROJECT NAME: Circo

CASE NO.: 03-1332

ENVIRON SAMPLE ID.	COLLECTION DATE	COLLECTED BY (Initials)	MATRIX	TOTAL NO. OF CONTAINERS	ANALYSES: TPH extr. for PCB	COMMENTS
Sludge on Feb 4	2/4	DS	oil/sludge	1	X	Rush analysis as soon as possible please
TOTAL				1	1	

results attention Robert Elgas

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:
[signature]	2-4-91	6:08	[signature]	C, T	2-4-91	18:68

California Analytical
Laboratory

Enseco
A CORNING Company

March 11, 1991
Lab ID: 056940

Patricia Curl
S.P. Environmental
9719 Lincoln Village Dr.
Suite 310
Sacramento, CA 95827

Dear Ms. Curl:

Enclosed is the report for the two soil samples for your Curoco Project # 05294, which were received at Enseco-Cal Lab on 19 February 1991.

The report consists of the following sections:

I Sample Description
II Analysis Request
III Quality Control Report
IV Analysis Results

If you have any questions, please feel free to call.

Sincerely,

Robert Weidenfeld
Program Administrator

td

Enseco Incorporated
2544 Industrial Blvd.
West Sacramento, CA 95691
916/372-1393 Fax: 916/372-7768

I Sample Description

See the attached Sample Description Information.

The samples were received under chain-of-custody.

II Analysis Request

The following analytical test was requested.

Lab ID	Analysis Description
056940-1, 2	Total Petroleum Hydrocarbons

III Quality Control

A. Project Specific QC. No project specific QC (i.e., spikes and/or duplicates) was requested.

B. Method Blank Results. A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your samples.

No target parameters were detected in the method blanks associated with your samples at the reporting limit levels noted on the attached Method Blank Report.

C. Laboratory Control Samples - The LCS Program

Duplicate Control Samples. A DCS is a well-characterized matrix (blank water, sand or celite) which is spiked with certain target parameters and analyzed at approximately 10% of the sample load in order to establish method-specific control limits. The DCS results associated with your samples are on the attached Duplicate Control Sample Report.

Accuracy is measured by Percent Recovery as in:

$$\% \text{ recovery} = \frac{(\text{measured concentration})}{(\text{actual concentration})} \times 100$$

Precision is measured using duplicate tests by Relative Percent Difference (RPD) as in:

$$\text{RPD} = \frac{(\% \text{ recovery test 1} - \% \text{ recovery test 2})}{(\% \text{ recovery test 1} + \% \text{ recovery test 2})/2} \times 100$$

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery +/-3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent

difference + 3 standard deviation units. In cases where there is not enough historical data, EPA limits or advisory limits are set, with the approval of the Quality Assurance department.

IV Analysis Results

Test methods may include minor modifications of published EPA Methods such as reporting limits or parameter lists. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis; i.e., no correction is made for moisture content, unless the method requires or the client requests that such correction be made.

Results are on the attached data sheets.

Enseco
A Corning Company

SAMPLE DESCRIPTION INFORMATION
for
SP Environmental

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
056940-0001-SA	11090	SOIL	15 FEB 91	09:00	19 FEB 91
056940-0002-SA	11095	SOIL	15 FEB 91	14:30	19 FEB 91

Enseco
A Corning Company

METHOD BLANK REPORT
Semivolatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: TPH-GC-D-HPNS-S			
Matrix: SOIL			
QC Lot: 20 FEB 91-A QC Run: 20 FEB 91-A			
Diesel Fuel	ND	ug/kg	1000

Enseco
A Corning Company

QC LOT ASSIGNMENT REPORT
Semivolatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
056940-0001-SA	SOIL	TPH-D-HP-S	20 FEB 91-A	20 FEB 91-A
056940-0002-SA	SOIL	TPH-D-HP-S	20 FEB 91-A	20 FEB 91-A

Enseco
A Coming Company

DUPLICATE CONTROL SAMPLE REPORT
Semivolatile Organics by GC

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: TPH-D-HP-S								
Matrix: SOIL								
QC Lot: 20 FEB 91-A								
Concentration Units: ug/kg								
Diesel Fuel	100000	92900	88900	90900	91	50-150	4.4	50

Calculations are performed before rounding to avoid round-off errors in calculated results.

Enseco
A Corning Company

Total Petroleum Hydrocarbons by GC

Method TPH-GC/FID

Client Name: SP Environmental
Client ID: 11095
Lab ID: 056940-0002-SA
Matrix: SOIL
Authorized: 19 FEB 91

Sampled: 15 FEB 91
Prepared: 20 FEB 91

Received: 19 FEB 91
Analyzed: 06 MAR 91

Parameter	Result	Units	Reporting Limit
Diesel Fuel	ND	ug/kg	1000

ND = Not detected
NA = Not applicable

Reported By: Kris Rogers

Approved By: Tom MacClanahan

The cover letter is an integral part of this report.
Rev 230787

SP - EvS

CHAIN-OF-CUSTODY RECORD

No. 10191

SP - Environmental Systems, Inc. • 9719 Lincoln Village Drive, Ste. 310 • Sacramento, CA 95827 • Phone 916-369-8971 • FAX 916-369-8370

PROJECT NAME	PROJECT LOCATION
CURCO	ALBANY CA

PROJ. NO.	PROJECT CONTACT	PROJECT TELEPHONE NO.
05294	PATRICIA CURL	916 369-8971

CLIENT'S REPRESENTATIVE	PROJECT MANAGER/SUPERVISOR

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE LOCATION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS) TPH-8015 mod	REMARKS
1	11090	2/15/91	0900		X	SOIL - South end of ditch	1	X	appears clean
2	11095	2/15	1430		X	SOIL - North end of ditch	1	X	appears clean
3									
4									
5									
6									
7									
8									
9									
10									

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1-2	Patricia Curl	Peter Boroff	2/19/91	1010
2					
3					
4					

REMARKS: Regular TA

SAMPLER'S NAME: PATRICIA CURL

SAMPLER'S SIGNATURE: Patricia Curl

LAB COPY

California Analytical
Laboratory

Enseco
A CORNING Company

February 28, 1991
Lab ID: 056990

Patricia Curl
S. P. Environmental
9719 Lincoln Village Drive
Suite 310
Sacramento, CA 95827

Dear Ms. Curl:

Enclosed is the report for the two samples, one aqueous and one soil, for your Curoco Project, Number 05294, which were received at Enseco-Cal Lab on 21 February 1991.

The report consists of the following sections:

I	Sample Description
II	Analysis Request
III	Quality Control Report
IV	Analysis Results

These data were previously reported by facsimile on 25 February 1991.

If you have any questions, please feel free to call.

Sincerely,

Robert W. Weidenfeld
Program Administrator

gwm/ak

Enseco Incorporated
2544 Industrial Boulevard
West Sacramento, California 95691
916/372-1393 Fax: 916/372-7768

I Sample Description

See the attached Sample Description Information.

The samples were received under chain-of-custody.

II Analysis Request

The following analytical tests were requested.

Lab ID	Analysis Description
056990-0001, 2	PCBs
	Total Petroleum Hydrocarbons
	C.C.R. Metals

III Quality Control

A. Project Specific QC. No project specific QC (i.e., spikes and/or duplicates) was requested.

B. Method Blank Results. A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your samples.

No target parameters were detected in the method blanks associated with your samples at the reporting limit levels noted in the attached Method Blank Report.

C. Laboratory Control Samples - The LCS Program

Duplicate Control Samples. A DCS is a well-characterized matrix (blank water, sand or celite) which is spiked with certain target parameters and analyzed at approximately 10% of the sample load in order to establish method-specific control limits. The DCS results associated with your samples are on the attached Duplicate Control Sample Report.

Single Control Samples. An SCS consists of a control matrix that is spiked with surrogate compounds appropriate to the method being used. In cases where no surrogate is available, (e.g. metals or conventional analyses) a single control sample identical to the DCS serves as the control sample. An SCS is prepared for each sample lot. Accuracy is calculated identically to the DCS. The SCS results associated with your samples are on the attached Single Control Sample Report.

Accuracy is measured by Percent Recovery as in:

$$\% \text{ recovery} = \frac{\text{(measured concentration)}}{\text{(actual concentration)}} \times 100$$

Precision is measured using duplicate tests by Relative Percent Difference (RPD) as in:

$$\text{RPD} = \frac{\text{(\% recovery test 1 - \% recovery test 2)}}{\text{(\% recovery test 1 + \% recovery test 2)/2}} \times 100$$

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery +/-3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference + 3 standard deviation units. In cases where there is not enough historical data, EPA limits or advisory limits are set, with the approval of the Quality Assurance department.

IV Analysis Results

Test methods may include minor modifications of published EPA Methods such as reporting limits or parameter lists. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis; i.e., no correction is made for moisture content, unless the method requires or the client requests that such correction be made.

Results are on the attached data sheets.

Enseco
A Corning Company

SAMPLE DESCRIPTION INFORMATION
for
SP Environmental

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
056990-0001-SA	# 1	AQUEOUS	21 FEB 91	09:30	21 FEB 91
056990-0002-SA	# 2	SOIL	21 FEB 91	10:00	21 FEB 91

Enseco
A Corning Company

QC LOT ASSIGNMENT REPORT
Semivolatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
056990-0001-SA	AQUEOUS	PCB-A	22 FEB 91-A	22 FEB 91-A
056990-0001-SA	AQUEOUS	TPH-D-A	22 FEB 91-A	22 FEB 91-A
056990-0002-SA	SOIL	PCB-S	12 FEB 91-A	22 FEB 91-A
056990-0002-SA	SOIL	TPH-D-S	22 FEB 91-A	22 FEB 91-A

Enseco
A Corning Company

METHOD BLANK REPORT
Semivolatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: 608-PCB-A			
Matrix: AQUEOUS			
QC Lot: 22 FEB 91-A QC Run: 22 FEB 91-A			
Aroclor 1016	ND	ug/L	0.065
Aroclor 1221	ND	ug/L	0.065
Aroclor 1232	ND	ug/L	0.065
Aroclor 1242	ND	ug/L	0.065
Aroclor 1248	ND	ug/L	0.065
Aroclor 1254	ND	ug/L	0.50
Aroclor 1260	ND	ug/L	0.50
Test: TPH-GC-D-A			
Matrix: AQUEOUS			
QC Lot: 22 FEB 91-A QC Run: 22 FEB 91-A			
Kerosene	ND	mg/L	0.10
Stoddard Solvent	ND	mg/L	0.10
Aviation Fuel (JP4)	ND	mg/L	0.10
Diesel Fuel	ND	mg/L	0.10
Unknown hydrocarbon	ND	mg/L	0.10
Test: 8080-PCB-S			
Matrix: SOIL			
QC Lot: 12 FEB 91-A QC Run: 22 FEB 91-A			
Aroclor 1016	ND	ug/kg	50
Aroclor 1221	ND	ug/kg	50
Aroclor 1232	ND	ug/kg	50
Aroclor 1242	ND	ug/kg	50
Aroclor 1248	ND	ug/kg	50
Aroclor 1254	ND	ug/kg	50
Aroclor 1260	ND	ug/kg	50
Test: TPH-GC-D-S			
Matrix: SOIL			
QC Lot: 22 FEB 91-A QC Run: 22 FEB 91-A			
Kerosene	ND	mg/kg	10
Stoddard Solvent	ND	mg/kg	10
Aviation Fuel (JP4)	ND	mg/kg	10
Diesel Fuel	ND	mg/kg	10

Enseco
A Corning Company

METHOD BLANK REPORT
Semivolatile Organics by GC (cont.)

Analyte	Result	Units	Reporting Limit
Test: TPH-GC-D-S			
Matrix: SOIL			
QC Lot: 22 FEB 91-A QC Run: 22 FEB 91-A			
Unknown hydrocarbon	ND	mg/kg	10

Enseco
A Corning Company

DUPLICATE CONTROL SAMPLE REPORT
Semivolatile Organics by GC

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: PCB-A Matrix: AQUEOUS QC Lot: 22 FEB 91-A Concentration Units: ug/L								
Aroclor 1254	5.0	4.37	4.38	4.38	88	52-136	0.2	36
Category: TPH-D-A Matrix: AQUEOUS QC Lot: 22 FEB 91-A Concentration Units: mg/L								
Diesel Fuel	5.0	6.42	5.93	6.18	124	50-130	7.9	40
Category: PCB-S Matrix: SOIL QC Lot: 12 FEB 91-A Concentration Units: ug/kg								
Aroclor 1254	167	156	166	161	96	48-127	6.2	24
Category: TPH-D-S Matrix: SOIL QC Lot: 22 FEB 91-A Concentration Units: ug/kg								
Diesel Fuel	100	117	114	116	116	52-128	2.6	35

Calculations are performed before rounding to avoid round-off errors in calculated results.

Enseco
A Corning Company

SINGLE CONTROL SAMPLE REPORT
Semivolatile Organics by GC

Analyte	Concentration Spiked	Measured	Accuracy(%) SCS	Limits
Category: PCB-S				
Matrix: SOIL				
QC Lot: 12 FEB 91-A QC Run: 22 FEB 91-A				
Concentration Units: ug/kg				
Aroclor 1254	167	156	93	48-127

Calculations are performed before rounding to avoid round-off errors in calculated results.

Enseco
A Corning Company

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
056990-0001-SA	AQUEOUS	ICP-AT	22 FEB 91-B	22 FEB 91-B
056990-0002-SA	SOIL	ICP-S	22 FEB 91-N	22 FEB 91-N

Enseco
A Coming Company

METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: ICP-CAMT-AT			
Matrix: AQUEOUS			
QC Lot: 22 FEB 91-B QC Run: 22 FEB 91-B			
Antimony	ND	mg/L	1.0
Arsenic	ND	mg/L	0.50
Barium	ND	mg/L	5.0
Beryllium	ND	mg/L	0.050
Cadmium	ND	mg/L	0.050
Chromium	ND	mg/L	0.50
Cobalt	ND	mg/L	5.0
Copper	ND	mg/L	2.0
Lead	ND	mg/L	0.50
Molybdenum	ND	mg/L	30.0
Nickel	ND	mg/L	2.0
Selenium	ND	mg/L	0.20
Silver	ND	mg/L	0.50
Thallium	ND	mg/L	2.0
Vanadium	ND	mg/L	2.0
Zinc	ND	mg/L	20.0
Test: ICP-CAMT-HI-S			
Matrix: SOIL			
QC Lot: 22 FEB 91-N QC Run: 22 FEB 91-N			
Antimony	ND	mg/kg	15.0
Arsenic	ND	mg/kg	10.0
Barium	ND	mg/kg	100
Beryllium	ND	mg/kg	0.75
Cadmium	ND	mg/kg	1.0
Chromium	ND	mg/kg	5.0
Cobalt	ND	mg/kg	80.0
Copper	ND	mg/kg	25.0
Lead	ND	mg/kg	5.0
Molybdenum	ND	mg/kg	350
Nickel	ND	mg/kg	20.0
Silver	ND	mg/kg	5.0
Thallium	ND	mg/kg	50.0
Vanadium	ND	mg/kg	24.0
Zinc	ND	mg/kg	250

Enseco
A Coming Company

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: ICP-AT Matrix: AQUEOUS QC Lot: 22 FEB 91-B Concentration Units: mg/L								
Aluminum	2.00	1.84	1.86	1.85	93	85-115	1.2	10
Antimony	0.50	0.431	0.424	0.428	86	85-115	1.6	10
Arsenic	0.5	0.473	0.464	0.469	94	85-115	2.1	10
Barium	2.0	1.91	1.92	1.91	96	85-115	0.7	10
Beryllium	0.050	0.0470	0.0475	0.0473	95	80-115	1.0	10
Boron	1.0	0.995	0.995	0.995	99	85-115	0.0	10
Cadmium	0.050	0.0503	0.0504	0.0504	101	81-118	0.3	10
Calcium	100	102	104	103	103	85-115	1.3	10
Chromium	0.20	0.183	0.182	0.182	91	85-115	0.6	10
Cobalt	0.50	0.458	0.464	0.461	92	85-115	1.3	10
Copper	0.25	0.243	0.241	0.242	97	85-115	1.1	10
Iron	1.0	0.953	0.955	0.954	95	85-115	0.2	10
Lead	0.50	0.468	0.467	0.468	94	85-115	0.1	10
Lithium	0.20	0.209	0.200	0.205	102	85-115	4.5	10
Magnesium	50	48.8	49.0	48.9	98	85-115	0.4	10
Manganese	0.50	0.460	0.464	0.462	92	85-115	1.0	10
Molybdenum	0.20	0.191	0.188	0.190	95	85-115	1.9	10
Nickel	0.50	0.454	0.465	0.460	92	83-115	2.6	10
Potassium	50	50.4	50.5	50.4	101	83-115	0.1	10
Selenium	2.0	1.99	2.00	1.99	100	85-115	0.8	10
Silver	0.050	0.0456	0.0462	0.0459	92	56-116	1.3	35
Sodium	100	99.1	99.1	99.1	99	85-115	0.0	10
Thallium	2.0	1.92	1.95	1.94	97	84-118	1.6	10
Tin	4.0	3.55	3.58	3.56	89	80-115	1.0	15
Titanium	0.20	0.149	0.150	0.150	75#	85-115	0.9	10
Vanadium	0.50	0.476	0.479	0.477	95	82-115	0.8	20
Zinc	0.50	0.464	0.465	0.464	93	80-115	0.3	20
Category: ICP-S Matrix: SOIL QC Lot: 22 FEB 91-N Concentration Units: mg/kg								
Aluminum	200	183	183	183	91	84-115	0.2	11
Antimony	50	51.4	51.6	51.5	103	81-115	0.3	10
Arsenic	50	51.6	50.5	51.1	102	82-115	2.1	10
Barium	200	189	191	190	95	85-115	0.9	10
Beryllium	5.0	4.66	4.72	4.69	94	70-110	1.4	10
Boron	100	99.2	103	101	101	85-115	3.9	10

= Recovery outside QC Limits

Calculations are performed before rounding to avoid round-off errors in calculated results.

Enseco
A Corning Company

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation (cont.)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: ICP-S								
Matrix: SOIL								
QC Lot: 22 FEB 91-N								
Concentration Units: mg/Kg								
Cadmium	5.0	4.45	4.55	4.50	90	81-118	2.2	15
Calcium	10000	9520	9610	9560	96	85-115	0.9	10
Chromium	20	18.4	18.6	18.5	92	84-115	1.0	17
Cobalt	50	47.5	47.2	47.3	95	80-115	0.6	10
Copper	25	24.3	24.4	24.4	98	81-115	0.4	10
Iron	100	96.2	96.7	96.5	96	85-115	0.5	14
Lead	50	47.1	48.8	47.9	96	80-115	3.6	11
Lithium	20.0	18.7	18.7	18.7	93	85-115	0.3	10
Magnesium	5000	4970	4980	4980	100	85-115	0.2	10
Manganese	50.0	47.5	47.8	47.7	95	80-115	0.6	10
Molybdenum	20.0	18.2	18.4	18.3	92	85-115	1.4	10
Nickel	50.0	47.2	46.9	47.1	94	80-115	0.7	10
Potassium	5000	4790	4760	4780	96	82-115	0.6	10
Selenium	200.0	182	191	187	93	84-115	4.8	10
Silver	5.0	4.55	4.50	4.52	90	62-115	1.2	10
Sodium	10000	9620	9620	9620	96	85-115	0.0	10
Thallium	200	183	184	184	92	68-110	0.4	10
Tin	400	347	346	347	87	80-122	0.3	10
Titanium	20.0	12.8	13.0	12.9	65#	85-115	1.1	10
Vanadium	50.0	48.0	48.2	48.1	96	85-115	0.4	10
Zinc	50	49.0	48.9	48.9	98	82-115	0.1	10

= Recovery outside QC Limits

Calculations are performed before rounding to avoid round-off errors in calculated results.

Enseco
A Corning Company

PCBs

Method 608

Client Name: SP Environmental
Client ID: # 1
Lab ID: 056990-0001-SA
Matrix: AQUEOUS
Authorized: 21 FEB 91

Sampled: 21 FEB 91
Prepared: 22 FEB 91

Received: 21 FEB 91
Analyzed: 25 FEB 91

Parameter	Result	Units	Reporting Limit
Aroclor 1016	ND	ug/L	5.0
Aroclor 1221	ND	ug/L	5.0
Aroclor 1232	ND	ug/L	5.0
Aroclor 1242	ND	ug/L	5.0
Aroclor 1248	ND	ug/L	5.0
Aroclor 1254	ND	ug/L	5.0
Aroclor 1260	ND	ug/L	5.0

ND = Not detected
NA = Not applicable

Reported By: John Mitchell

Approved By: Tom MacClanahan

The cover letter is an integral part of this report.
Rev 230787

Enseco
A Corning Company

PCBs

Method 8080

Client Name: SP Environmental
Client ID: # 2
Lab ID: 056990-0002-SA
Matrix: SOIL Sampled: 21 FEB 91 Received: 21 FEB 91
Authorized: 21 FEB 91 Prepared: 22 FEB 91 Analyzed: 25 FEB 91

Parameter	Result	Wet wt. Units	Reporting Limit	
Aroclor 1016	ND	ug/kg	50	
Aroclor 1221	ND	ug/kg	50	
Aroclor 1232	ND	ug/kg	50	
Aroclor 1242	ND	ug/kg	50	
Aroclor 1248	ND	ug/kg	50	
Aroclor 1254	ND	ug/kg	150	G
Aroclor 1260	ND	ug/kg	50	

Note G : Reporting Limit raised due to matrix interference.

ND = Not detected
NA = Not applicable

Reported By: John Mitchell Approved By: Tom MacClanahan

The cover letter is an integral part of this report.
Rev 230787

Enseco
A Corning Company

Total Petroleum Hydrocarbons

Method 3510/GC/FID

Client Name: SP Environmental
Client ID: # 1
Lab ID: 056990-0001-SA
Matrix: AQUEOUS
Authorized: 21 FEB 91

Sampled: 21 FEB 91
Prepared: 22 FEB 91

Received: 21 FEB 91
Analyzed: 22 FEB 91

Parameter	Result	Units	Reporting Limit
Kerosene	ND	mg/L	0.10
Stoddard Solvent	ND	mg/L	0.10
Aviation Fuel (JP4)	ND	mg/L	0.10
Diesel Fuel	ND	mg/L	0.10
Unknown hydrocarbon	ND	mg/L	0.10

ND = Not detected
NA = Not applicable

Reported By: Kris Rogers

Approved By: Tom MacClanahan

The cover letter is an integral part of this report.
Rev 230787

Enseco
A Corning Company

Total Petroleum Hydrocarbons

Method GC/FID

Client Name: SP Environmental
Client ID: # 2
Lab ID: 056990-0002-SA
Matrix: SOIL Sampled: 21 FEB 91 Received: 21 FEB 91
Authorized: 21 FEB 91 Prepared: 22 FEB 91 Analyzed: 23 FEB 91

Parameter	Result	Units	Reporting Limit	
Kerosene	ND	mg/kg	50	R
Stoddard Solvent	ND	mg/kg	50	
Aviation Fuel (JP4)	ND	mg/kg	50	
Diesel Fuel	ND	mg/kg	50	
Unknown hydrocarbon	230	mg/kg	10	1

Note R : Raised reporting limit(s) due to high analyte level(s).

Note 1 : This sample contains an unknown hydrocarbon pattern in the approximate range of C-7 to C-30. Quantitation was based on a Diesel reference.

ND = Not detected
NA = Not applicable

Reported By: Kris Rogers Approved By: Tom MacClanahan

The cover letter is an integral part of this report.
Rev 230787

Enseco
A Coming Company

C.C.R. METALS
California Title 22 (Title 26) Protocol
Water Sample

Client Name: SP Environmental
Client ID: # 1
Lab ID: 056990-0001-SA
Matrix: AQUEOUS
Authorized: 21 FEB 91

Sampled: 21 FEB 91
Prepared: See Below

Received: 21 FEB 91
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	1.0	200.7	22 FEB 91	22 FEB 91
Arsenic	ND	mg/L	0.50	200.7	22 FEB 91	22 FEB 91
Barium	ND	mg/L	5.0	200.7	22 FEB 91	22 FEB 91
Beryllium	ND	mg/L	0.050	200.7	22 FEB 91	22 FEB 91
Cadmium	ND	mg/L	0.050	200.7	22 FEB 91	22 FEB 91
Chromium	ND	mg/L	0.50	200.7	22 FEB 91	22 FEB 91
Cobalt	ND	mg/L	5.0	200.7	22 FEB 91	22 FEB 91
Copper	ND	mg/L	2.0	200.7	22 FEB 91	22 FEB 91
Lead	ND	mg/L	0.50	200.7	22 FEB 91	22 FEB 91
Molybdenum	ND	mg/L	30.0	200.7	22 FEB 91	22 FEB 91
Nickel	ND	mg/L	2.0	200.7	22 FEB 91	22 FEB 91
Selenium	ND	mg/L	0.20	200.7	22 FEB 91	22 FEB 91
Silver	ND	mg/L	0.50	200.7	22 FEB 91	22 FEB 91
Thallium	ND	mg/L	2.0	200.7	22 FEB 91	22 FEB 91
Vanadium	ND	mg/L	2.0	200.7	22 FEB 91	22 FEB 91
Zinc	ND	mg/L	20.0	200.7	22 FEB 91	22 FEB 91

ND = Not detected
NA = Not applicable

Reported By: Evin Mckinney

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Enseco
A Corning Company

Amended

C.C.R. METALS
California Title 22 (Title 26) Protocol
TTLC (Total) Data Sheet

Client Name: SP Environmental
Client ID: # 2
Lab ID: 056990-0002-SA
Matrix: SOIL
Authorized: 21 FEB 91

Sampled: 21 FEB 91
Prepared: See Below

Received: 21 FEB 91
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/kg	15.0	6010	22 FEB 91	22 FEB 91
Arsenic	47.0	mg/kg	10.0	6010	22 FEB 91	22 FEB 91
Barium	139	mg/kg	100	6010	22 FEB 91	22 FEB 91
Beryllium	ND	mg/kg	0.75	6010	22 FEB 91	22 FEB 91
Cadmium	ND	mg/kg	1.0	6010	22 FEB 91	22 FEB 91
Chromium	103	mg/kg	5.0	6010	22 FEB 91	22 FEB 91
Cobalt	ND	mg/kg	80.0	6010	22 FEB 91	22 FEB 91
Copper	61.6	mg/kg	25.0	6010	22 FEB 91	22 FEB 91
Lead	62.0	mg/kg	5.0	6010	22 FEB 91	22 FEB 91
Molybdenum	ND	mg/kg	350	6010	22 FEB 91	22 FEB 91
Nickel	147	mg/kg	20.0	6010	22 FEB 91	22 FEB 91
Selenium	ND	mg/kg	10.0	6010	22 FEB 91	22 FEB 91
Silver	ND	mg/kg	5.0	6010	22 FEB 91	22 FEB 91
Thallium	ND	mg/kg	50.0	6010	22 FEB 91	22 FEB 91
Vanadium	38.7	mg/kg	24.0	6010	22 FEB 91	22 FEB 91
Zinc	676	mg/kg	250	6010	22 FEB 91	22 FEB 91

ND = Not detected
NA = Not applicable

Reported By: Evin Mckinney

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

SP - EvS

CHAIN-OF-CUSTODY RECORD

No. 10195

SP - Environmental Systems, Inc. • 9719 Lincoln Village Drive, Ste. 310 • Sacramento, CA 95827 • Phone 916-369-8971 • FAX 916-369-8370

PROJECT NAME: CUROCO	PROJECT LOCATION: ALBANY CA
PROJ. NO.: 05294	PROJECT CONTACT: PATRICIA CURL
PROJECT TELEPHONE NO.: 369-8971	
CLIENT'S REPRESENTATIVE:	PROJECT MANAGER/SUPERVISOR:

ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS): TPH-8015m extractables; PCB-8080 (PCBs only); CAM metals (high)

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE LOCATION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	TPH-8015m extractables	PCB-8080 (PCBs only)	CAM metals (high)						REMARKS
1	1	2/21/91	0930		X	WATER FROM TANK	4	X	X	X						REC'D in good COND.
2	2	2/21/91	1000		X	SOIL	1	X	X	X						
3																
4																
5																
6																
7																
8																
9																
10																

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1-2	Patricia Curl	[signature]	2/21/91	1400
2					
3					
4					

REMARKS: 48 hr turnaround

SAMPLER'S NAME: CURL

SAMPLER'S SIGNATURE: Patricia Curl

LAB COPY

APPENDIX B

MANIFESTS

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *Form designed for use on elite (12-pitch typewriter).*

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90520514

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: CAD006913206 00001
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: SOUTHERN PACIFIC TRANS CO. ONE MARKET PLAZA SAN FRANCISCO, CA 94105
4. Generator's Phone: 916 369 8971

A. State Manifest Document Number: 90520514
B. State Generator's ID: 1144A3 6009030

5. Transporter 1 Company Name: ERICKSON INC
6. US EPA ID Number: CAD009466392
C. State Transporter's ID: 019
D. Transporter's Phone: 415 235 1393

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address: CHEMICAL WASTE MANAGEMENT PO BOX 471 - OLD SKYLINE RD KETTLEMAN CITY, CA 93239
10. US EPA ID Number: CAD 003986718
G. State Facility's ID: 003905
H. Facility's Phone: 800-222-2964

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. SOIL WITH OILY SLUDGE & CORRUGATED PIPE. NON-HAZARDOUS	001	DM	12	Y	State 611 / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above: CURCO - 536 CLEVELAND ST., ALBANY, CA. SPEUS # 05294 CWM PROFILE K-23771

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: MARK S DEKUM — Signature: [signature] — Month Day Year: 03 07 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: STEVE STEWARD — Signature: [signature] — Month Day Year: 03 08 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

Do Not Write Below This Line

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 400, Sacramento, CA 95812-0400

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *Form designed for use on elite (12-pitch typewriter).*

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD00691322
Manifest Document No.: 600003
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
SOUTHERN PACIFIC TRANS CO
ONE MARKET PLAZA
SAN FRANCISCO, CA 94105

4. Generator's Phone (916) 369-8971

A. State Manifest Document Number: 90520513

B. State Generator's ID: HYHQ36009070

5. Transporter 1 Company Name: ERICKSON INC
6. US EPA ID Number: CAD009466392

C. State Transporter's ID: 106242
D. Transporter's Phone: 415 235-1393

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address:
CHEMICAL WASTE MANAGEMENT, INC
PO BOX 471 - OLD SKYLINE RD
KETTLEMAN CITY, CA 93239
10. US EPA ID Number: CAD000319867118

G. State Facility's ID: 003905
H. Facility's Phone: 800-222-2964

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON HAZARDOUS SOIL WITH OILY SLUDGE + CORRUGATED PIPE	001	CM	12	Y	State 611 EPA/Other
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above:
CUROCO PROPERTY - 536 CLEVELAND ST ALBANY, CA
SPEUS #05294
CWM PROFILE K-23771

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Mark S. Jackum — Signature: [signature] — Month Day Year: 03 29 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: LK Badfield — Signature: [signature] — Month Day Year: 03 29 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

Do Not Write Below This Line

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 400, Sacramento, CA 95812-0400

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *Form designed for use on elite (12-pitch typewriter).*

3032

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD006911320 Manifest Document No. 60002
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
SOUTHERN PACIFIC TRANSPORTATION COMPANY
ONE MARKET PLAZA
SAN FRANCISCO, CA 94105
4. Generator's Phone (916) 369-5971

A. State Manifest Document Number 90520515
B. State Generator's ID HIYH4326009930

5. Transporter 1 Company Name: ERICKSON, INC
6. US EPA ID Number: CAD009466392
C. State Transporter's ID 106158
D. Transporter's Phone 415-235-1393

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC
PO BOX 471 - OLD SKYLINE RD
Kettleman City, CA 93239
10. US EPA ID Number: CAD000646117
G. State Facility's ID CAT000646117
H. Facility's Phone 800-222-2964

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. SOIL WITH OILY SLUDGE and CORRUGATED PIPE - NON-HAZARDOUS	001	CM	12	Y	State 611 EPA/Other
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. 03 b.
c. d.

15. Special Handling Instructions and Additional Information
CUROCO PROPERTY - 536 Cleveland St, ALBANY, CA
SPEIS # 05294
CWM K-23771 PROFILE

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: MARK S. DOCKUM
Signature: [signature]
Month Day Year: 103091

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Robert A. Dart
Signature: [signature]
Month Day Year: 103091

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: ALAN MANEY
Signature: [signature]
Month Day Year: 103091

GENERATOR / TRANSPORTER / FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90520515

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

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B9704-16