

UST SITE REMEDIATION

93 OCT 18 PM 3: 57

PROJECT SITE

Goodyear Tire Center  
431 San Pablo Ave.  
ALBANY, CALIFORNIA

PREPARED FOR

Tim Corbett  
Falaschi Construction  
#1 Post St. Suite 500  
San Francisco, California 94104

SUBMITTED TO

Juliet Shin  
Dept. of Env. Health  
Alameda County  
80 Swan Way  
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PREPARED BY

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CEC PROJECT NO. 93-06-1301

October 14, 1993

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## Description of Excavation

In July of 1993, SEMCO Environmental Contractors removed a 550 gallon waste oil underground tank for the Goodyear Tire Center located at 431 San Pablo Ave., Albany, California (See Figure 1 for map of vicinity). The tank excavation was completed on July 20, 1993. Product was pumped from the tank and the was tank removed. The excavation was enlarged to an area of 9' X 16' and 10.5' depth.

Contamination was found in the soil and overexcavation continued on July 21, 1993. The site was excavated to new dimensions of 12' X 19' X 10.5'. On July 22nd, excavation continued to new dimensions of 17' X 29' X 10.5'. About 191 cubic yards of soil taken from the excavation was stockpiled on-site on visqueen plastic.

The area was backfilled with pea gravel and 3/4" crushed rock to depth of 5'. After compaction, the excavation was filled with imported, clean soil and compacted further. Photos of the tank and excavation are shown in Appendix A.

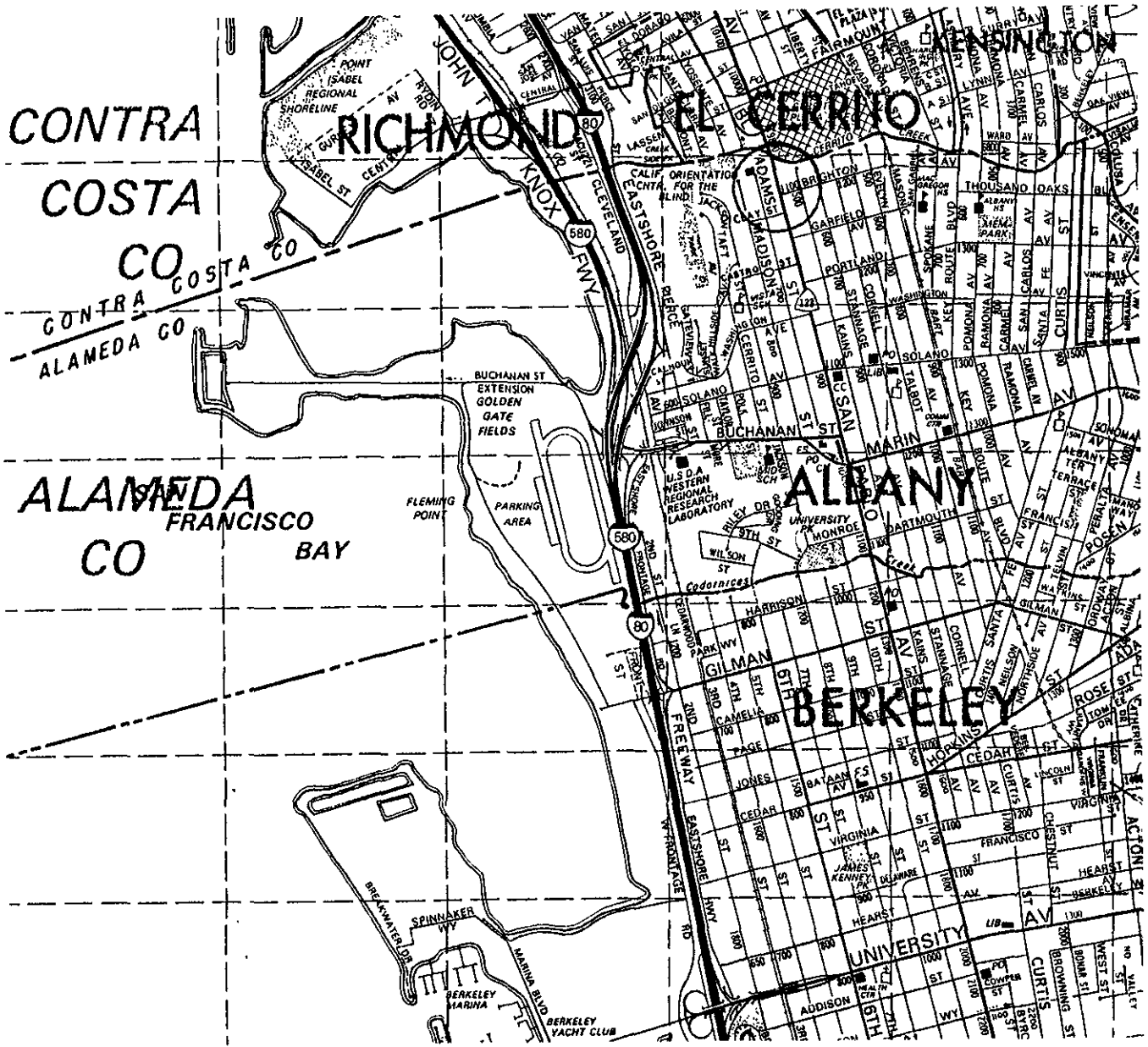


Figure 1. Vicinity Map

## Description of Tank

The tank did not have a remote fill, and the cap for direct fill was missing. Water had filled the tank and overflowed. A 1/2" hole was found @ 3:00. In addition, there were two small holes in center of tank and a few holes around both end rims. Oily water was pumped from the tank. After pumping tank contents, the tank was pulled and loaded on a truck. The tank hauling manifest (#92200996) and liquid hauling manifest (#93266884) are presented in Appendix B.

## Sampling Methods and Results

Samples of excavated soils were obtained for laboratory analysis in 2-in. I.D., 6-in. long brass tubes. The sample tubes were sealed at each end with Teflon sheeting and PVC end caps, then labeled with sample depth, date and time. The samples were stored in an ice chest with ice, maintained at 4° C, and transported under chain-of-custody to a State-Certified laboratory. The sampler was decontaminated after each use by washing in a trisodium phosphate solution, followed by tap water and deionized water rinses.

Soil samples were taken on three different days. The location of the samples is presented in Figure 2. The laboratory results and chain of custody records for all analytical tests are presented in Appendix C.

On July 20, 1993, a single soil sample was taken at a depth of 10' 3" in the bottom of the excavation. The sample was analyzed for TPH - Gasoline & Diesel, BTXE, Oil & Grease, EPA Method 8010 for halogenated volatile organics, and metals (Cd, Cr, Pb, Ni, and Zn). The results are summarized in Table 1. A low concentration of Diesel contamination was found in the bottom sample (38 mg/kg).

*How about 8270?*

On July 22, 1993, five soil samples were taken from the excavation area (West Sidewall - 6', North Sidewall - 6', South Sidewall - 4.5', East Sidewall -6', and Bottom - 11'). A summary of the results is presented in Table 2. Gasoline, Diesel, and BTEX were found in the North and West Sidewall Samples. Oil and Grease was present in the South and West samples.

The last set of samples were composite samples taken from the spoils piles on July 23, 1993. The summary of results is presented in Table 3. Oil and grease are present in the composite samples 1, 2, and 3. Barium, Cobalt, Nickel, Vanadium, and Mercury were detected in all samples. The concentrations are below the TTLC and also below 10 times the STLC values. No volatile organics were detected in the spoils samples.

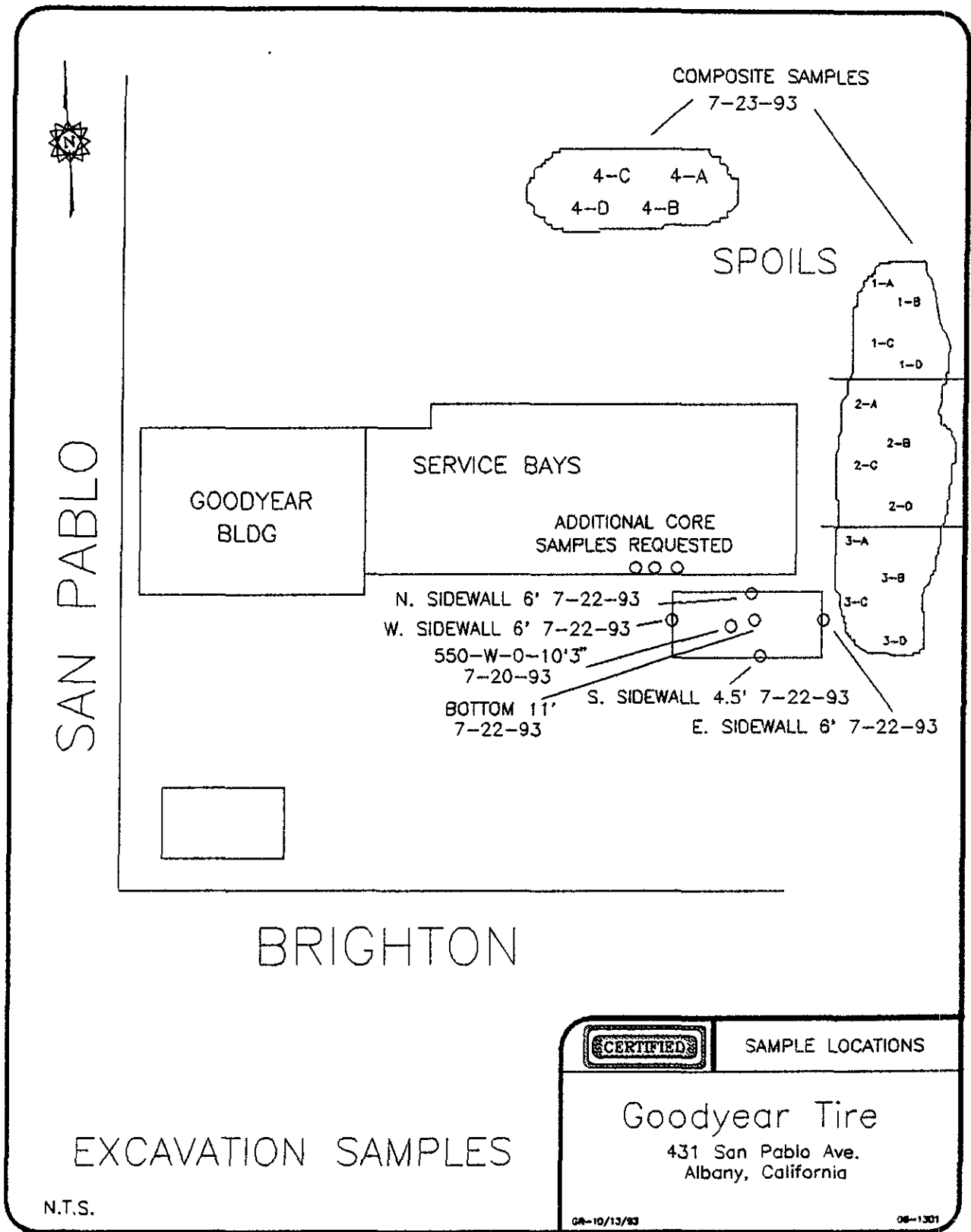


Figure 2. Site Map



Table 1. Summary of Results for Soil Sample Taken July 20, 1993 (Bottom of Excavation)

Analytical Test	Level	STLC (mg/l)	TTLC (mg/kg)
TPH-Gasoline (mg/kg)	ND		
TPH-Diesel (mg/kg)	38		
Benzene (mg/kg)	ND		
Toluene (mg/kg)	ND		
Xylene (mg/kg)	ND		
Ethyl Benzene (mg/kg)	ND		
Oil & Grease (mg/kg)	ND		
EPA 8010 Halogenated Volatile Organics	ALL ND		
Zinc	58	250	5000
Nickel	38	20	2000
Chromium	39	5	500
Cadmium	ND	1	100
Lead	7	5	1000

Table 2. Summary of Results for Soil Samples Taken July 22, 1993 (Sides and Bottom of Excavation)

	West - 6'	North - 6'	South - 6'	East - 6'	Bottom 11'
Gasoline (mg/kg)	49	17	ND	ND	ND
Diesel (mg/kg)	1600	1100	ND	ND	ND
Benzene (mg/kg)	0.12	ND	ND	ND	ND
Toluene (mg/kg)	0.016	0.012	ND	ND	ND
Ethyl Benzene (mg/kg)	0.12	0.037	ND	ND	ND
Xylene (mg/kg)	0.12	0.1	ND	ND	ND
Oil & Grease (mg/kg)	170	ND	240	ND	ND
EPA 8270 Semi Volatile Organics	ALL ND	ALL ND	ALL ND	ALL ND	ALL ND
EPA 8010 Halogenated Volatile Organics	ALL ND	ALL ND	ALL ND	ALL ND	ALL ND
Cadmium (mg/kg)	ND	ND	ND	ND	ND
Chromium (mg/kg)	53	42	40	46	22
Lead (mg/kg)	8	ND	6	ND	5
Nickel (mg/kg)	95	65	61	60	24
Zinc (mg/kg)	50	40	31	31	23

Table 3. Summary of Results for Soil Samples Taken July 23, 1993 (Composite Samples from Spoils)

	Comp 1 ABCD	Comp 2 ABCD	Comp 3 ABCD	Comp 4 ABCD
Oil & Grease (mg/kg)	83	93	220	ND
EPA 8240 Vol. Organics	ALL ND	ALL ND	ALL ND	ALL ND
EPA 8270 Semi-Vol. Org.	ALL ND	ALL ND	ALL ND	ALL ND
pH	9.8	7.0	7.6	7.6
Barium (mg/kg)	148	170	174	163
Cobalt (mg/kg)	13	16	19	19
Nickel (mg/kg)	74	90	96	79
Vanadium (mg/kg)	0.6	0.8	0.8	0.5
CN (mg/kg)	ND	ND	ND	ND
Sulfide (mg/kg)	ND	ND	ND	ND
Zinc (mg/kg)	69	50	4	5
Arsenic (mg/kg)	5	4	4	5
Chromium (mg/kg)	51	60	62	57
Copper (mg/kg)	35	25	58	31
Lead (mg/kg)	17	8	54	7
Hg (mg/kg)	0.2	0.23	0.15	0.2
Thallium (mg/kg)	ND	ND	ND	ND

## Summary and Recommendations

This report describes the removal of a 550 gallon tank for the Goodyear site at 431 San Pablo Ave., Albany, California. Work was completed between July 20th and July 23, 1993. Contamination was found and overexcavation was completed. The final dimensions of the excavation were 17' X 29' X 10.5' depth (about 191 cubic yards). Data from sampling conducted on July 22nd indicate that contamination is still present. Gasoline, Diesel, and BTEX contamination were found in the North and West Sidewall Samples.

SEMCO has recommended to Goodyear that further excavation be undertaken to remove the soil contamination. It is estimated that 30 to 50 cubic yards of soil will need to be removed on the San Pablo and building sides of the excavation. This work has been scheduled and will be completed in the very near future. In addition, Goodyear would like additional samples to be taken inside the building (see Figure 2 for approximate locations).

**APPENDICES**

## **APPENDIX A -- Photos of Site**

Photo 1. Overhead View of Buried Tank and Piping.

Photo 2. 550 Gallon UST After Removal.

Photo 3. End View of Tank.

Photo 4. Original Excavation (9' X 16' X 10.5' depth).

Photo 5. Excavation to New Dimension of (12' X 19' X 10.5' depth).

Photo 6. West View After Excavation to 17' X 29' X 10.5' depth.

Photo 7. East View After Excavation to 17' X 29' X 10.5' depth.

Photo 8. View of Bottom of Excavation (Approximately 11' depth).



Photo 1. Overhead View of Buried Tank and Piping.



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Photo 7. East View After Excavation to 17' X 29' X 10.5' depth.



Photo 8. View of Bottom of Excavation (Approximately 11' depth).



**APPENDIX B -- Waste Hauling Manifests**

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1 Generator's US EPA ID No <u>CAL0539441053FCIC11C13</u>	Manifest Document No <u>1 of 1</u>	2 Page 1	Information in the shaded areas is not required by Federal law
3. Generator's Name and Mailing Address <u>Tim Corbett Const, c/o Falaschi Const., #1 Post St., Ste 500, SF CA 94104</u>		4. US EPA ID Number <u>92200996</u>		5. Generator's Phone <u>(415) 986-5669</u>	
5. Transporter 1 Company Name <u>RICH HAMILTON TRUCKING</u>		6. US EPA ID Number <u>CA11010011124113</u>		7. Transporter 1 Phone <u>(209) 573-4100</u>	
7. Transporter 2 Company Name		8. US EPA ID Number		9. Transporter 2 Phone	
9. Designated Facility Name and Site Address <u>ERICKSON, INC. 255 PARR BLVD. RICHMOND, CA 94801</u>		10. US EPA ID Number <u>CA1010094616392</u>		11. Facility Phone <u>(510) 235-1998</u>	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. <u>WASTE EMPTY STORAGE TANK NON-RCRA HAZARDOUS WASTE SOLID.</u>		<u>001</u>	<u>TIP</u>	<u>010510</u>	<u>P</u>
b.					
c.					
d.					
<p><u>QTY. 1 EMPTY STORAGE TANK(S) WITH TANK(S) HAVE BEEN TIERED WITH 45 LBS. DRY ICE PER PER 1000 GAL. CAPACITY</u></p>					
15. Special Handling Instructions and Additional Information <u>Site: 431 San Pablo Ave., Albany</u> <u>KEEP AWAY FROM SOURCES OF IGNITION. ALWAYS WEAR HARDHATS WHEN WORKING AROUND</u> <u>U.S.T.'S 24 HOUR CONTACT NAME <u>Robert Falaschi</u> &amp; PHONE <u>(415) 986-5669</u></u>					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the 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 federal, state and international laws.					
<p>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.</p>					
Printed/Typed Name <u>Robert E. Falaschi</u>		Signature <u>[Signature]</u>		Month Day Year <u>7 20 93</u>	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <u>Steve Raybourn</u>		Signature <u>[Signature]</u>		Month Day Year <u>07 20 93</u>	
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 <u>DAVID SATO SEMCO</u>		Signature <u>[Signature]</u>		Month Day Year <u>07 20 93</u>	

92200996  
 WITHIN CALIFORNIA CALL 1-800-852-7650  
 OUTSIDE CALIFORNIA CALL 1-800-424-8802  
 IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER

DO NOT WRITE BELOW THIS LINE.

SEP - 2 1993

Received

White To TSDf SENDS THIS COPY TO DTSC WITHIN 30 DAYS  
 P O Box 3000, Sacramento, CA 95812

93266884  
 IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550  
 GENERATOR  
 TRANSPORTER  
 FACILITY

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. CAL05304488366864		Manifest Document No. 1 of 1		2. Page 1		Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address TIM BORBETT CONSTRUCTION C/O FALASCHI CONSTRUCTION #1 POST STREET, STE. 500 SAN FRANCISCO, CA 94104													
4. Generator's Phone (415) 986-5669													
5. Transporter 1 Company Name ALLIED PETROLEUM					6. US EPA ID Number CAL000112314								
7. Transporter 2 Company Name													
8. US EPA ID Number													
9. Designated Facility Name and Site Address REFINERIES SERVICE 13331 N HWY 33 PATTERSON, CA 95363													
10. US EPA ID Number CAD083166728													
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. NON RCRA HAZARDOUS WASTE LIQUID						12. Containers		13. Total		14. Unit			
						No.		Type		Quantity		Wt/Vol	
						001		TIT		00025 G			
b.													
c.													
d.													
15. Special Handling Instructions and Additional Information USE APPROPRIATE PROTECTIVE GEAR DESIGNATED FACILITY EMERGENCY CONTACT # (800) 874-4444 GENERATOR EMERGENCY CONTACT # (415) 986-5669 PICK-UP AT: 431 SAN PABLO AVE. ALBANY, CA													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the 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 federal, state and international laws.  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 C. Kelly				Signature <i>C. Kelly</i>				Month 07		Day 20		Year 99	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Colin Kelly				Signature <i>Colin Kelly</i>				Month 07		Day 20		Year 99	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space <i>Actual yels. per wt. tag: 19</i>													
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name estarc				Signature <i>estarc</i>				Month 07		Day 20		Year 99	

DO NOT WRITE BELOW THIS LINE.

**APPENDIX C -- Laboratory Results**

Laboratory Results

Sample Taken

July 20, 1993

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. \_\_\_\_\_

**Section I**

Consultant Name SEMCO  
 Office Location 1741 Leslie Rd. San Mateo, CA 94402  
 Fax No. (415) 572-9734  
 Project Manager \_\_\_\_\_  
 Phone (415) 572 8033  
 Send Coolers to : Modesto  San Mateo   
 Project No. / P.O. No. FH FALM Co. Goodyear

TURN AROUND TIME  
 (Circle One)  
 Same Day \_\_\_\_\_  
 24 Hrs \_\_\_\_\_  
 48 Hrs \_\_\_\_\_  
 72 Hrs \_\_\_\_\_  
 5 Day \_\_\_\_\_

**SUPERIOR ANALYTICAL, INC.**  
Martinez San Francisco  
415/229-1512 415/647-2081

Sampler C. Kiper  
 Regulatory Agency Alameda County Clerk

<b>Section II</b>	<b>Analysis Request</b>	<b>Section III</b>	<b>Sample Information</b>
-------------------	-------------------------	--------------------	---------------------------

Sample Identification	S=Soil W=Water Matrix	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	O&G	8010	8240	Metals	Others * Subject to Subcontracting	Date	Time	Containers		Sampling Remarks	
													Quantity	Pres.	Bioremediation	Contamination
1 - 5.50-W-0-16' 3"	SOIL	✓			✓	✓	✓		✓		7/20/93	1245	1			
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

Relinquished by <u>[Signature]</u>	Date/Time <u>7/21/93</u>	Received by <u>[Signature]</u>	Please Initial _____
Organization <u>SEMCO</u>	<u>4:33 p.m.</u>	Organization <u>Superior</u>	Samples Stored in Ice _____
Relinquished by _____	Date/Time _____	Received by _____	Appropriate Containers _____
Organization _____		Organization _____	Samples Preserved _____
Relinquished by _____	Date/Time _____	Received by _____	VOA's without Headspace _____
Organization _____		Organization _____	Comments _____

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. \_\_\_\_\_

**Section I**

Consultant Name SEMCO  
 Office Location 1741 Leslie Rd. San Mateo, CA 94402  
 Fax No. (415) 672-9734  
 Project Manager CHUCK  
 Phone (415) 672 8033

TURN AROUND TIME  
 (Circle One)  
 Same Day \_\_\_\_\_  
 24 Hrs \_\_\_\_\_  
 48 Hrs \_\_\_\_\_  
 72 Hrs \_\_\_\_\_  
 5 Day           

**SUPERIOR ANALYTICAL, INC.**  
Martinez San Francisco  
415/229-1512 415/647-2081

Send Coolers to : Modesto  San Mateo   
 Project No. / P.O. No. FA Falaschi - Goodyear

Sampler C. Ripen  
 Regulatory Agency Alameda Toluca Chin

**Section II Analysis Request      Section III Sample Information**

Sample Identification	S=Soil W=Water Matrix	A=Air	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	O&G	8010	8240	Metals <small>Mn, Ni, Cr, Pb, Cu, Fe, Zn</small>	Others * Subject to Subcontracting	Date	Time	Containers		Sampling Remarks	
														Quantity	Pres.	Bioremediation	Contamination
1 -550-W-0-10'3"	SOIL		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		7/20/93	12:45	1			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

Please Initial: \_\_\_\_\_  
 Sample Stored in ice. Yes 4°C  
 Appropriate containers Yes  
 Samples preserved No  
 VOA's without headspace NA  
 Comments: C. Ripen

Relinquished by <u>[Signature]</u> Organization <u>SEMCO</u>	Date/Time <u>7/21/93</u> <u>4:33 p.m.</u>	Received by <u>[Signature]</u> Organization <u>Superior</u>	Please Initial _____ Samples Stored in Ice _____ Appropriate Containers _____ Samples Preserved _____ VOA's without Headspace _____ Comments _____
Relinquished by _____ Organization _____	Date/Time <u>4:33</u> <u>7/21</u>	Received by _____ Organization _____	
Relinquished by _____ Organization _____	Date/Time _____	Received by <u>[Signature]</u> Organization <u>Superior</u> <u>07/21/93</u>	



AUG 1 - 1993

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

Received

SEMCO  
Attn: CHUCK KIPERProject FALASCHI-GOODYEAR  
Reported 07/28/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
89333- 1	1-550-W-O-10'3"	07/20/93	07/27/93 Soil

## RESULTS OF ANALYSIS

Laboratory Number: 89333- 1

Gasoline:	ND<1
Benzene:	ND<.003
Toluene:	ND<.003
Ethyl Benzene:	ND<.003
Xylenes:	ND<.009
Diesel Range:	38
Oil. and Grease:	ND<50
Concentration:	mg/kg





# Superior Precision Analytical, Inc.

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## C E R T I F I C A T E   O F   A N A L Y S I S

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 89333

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
mg/kg = parts per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Soil: 50mg/kg

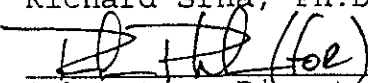
Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Soil: 10mg/kg

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Soil: 0.003mg/kg

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	82/91	10%	70-130
Benzene:	125/115	8%	70-130
Toluene:	116/109	6%	70-130
Ethyl Benzene:	110/108	2%	70-130
Xylenes:	110/108	2%	70-130
Oil and Grease:	69/74	7%	56-106
Diesel Range:	101/98	3%	75-125

Richard Srna, Ph.D.

 (for) 7/28/93  
Laboratory Director



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SEMCO  
Attn: CHUCK KIPER

Project FALASCHI-GOODYEAR  
Reported 28-July-1993

---

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Chronology

Laboratory Number 89333

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
1-550-W-O-10'3"	07/20/93	07/21/93	/ /	07/27/93		1



# Superior Precision Analytical, Inc.

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SEMCO  
Attn: CHUCK KIPER

Project FALASCHI-GOODYEAR  
Reported 28-July-1993

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Laboratory Number	Sample Identification	Matrix
89333- 1	1-550-W-O-10'3"	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 89333- 1

Chloromethane/Vinyl Ch:ND<10  
 Bromomethane: ND<5  
 Chloroethane: ND<5  
 Trichlorofluoromethane:ND<5  
 1,1-Dichloroethene: ND<5  
 Dichloromethane: ND<5  
 t-1,2-Dichloroethene: ND<5  
 1,1-Dichloroethane: ND<5  
 c-1,2-Dichloroethene: ND<5  
 Chloroform: ND<5  
 1,1,1-Trichloroethane: ND<5  
 Carbon tetrachloride: ND<5  
 1,2-Dichloroethane: ND<5  
 Trichloroethene: ND<5  
 c-1,3-Dichloropropene: ND<5  
 1,2-Dichloropropane: ND<5  
 t-1,3-Dichloropropene: ND<5  
 Bromodichloromethane: ND<5  
 1,1,2-Trichloroethane: ND<5  
 Tetrachloroethene: ND<5  
 Dibromochloromethane: ND<5  
 Chlorobenzene: ND<5  
 Bromoform: ND<5  
 1,1,2,2-Tetrachloroeth:ND<5  
 1,3-Dichlorobenzene: ND<5  
 1,2-Dichlorobenzene: ND<5  
 1,4-Dichlorobenzene: ND<5

Concentration: ug/Kg



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.  
Quality Assurance and Control Data - Soil


Laboratory Number 89333

Compound	Method Blank (ug/Kg)	PQL (ug/Kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane/Vinyl Ch:	ND<10	10			
Bromomethane:	ND<5	5			
Chloroethane:	ND<5	5			
Trichlorofluoromethane:	ND<5	5			
1,1-Dichloroethene:	ND<5	5	101%	75-125	3%
Dichloromethane:	ND<5	5			
1,2-Dichloroethene:	ND<5	5			
1,1-Dichloroethane:	ND<5	5			
1,2-Dichloroethene:	ND<5	5			
Chloroform:	ND<5	5			
1,1,1-Trichloroethane:	ND<5	5			
Carbon tetrachloride:	ND<5	5			
1,2-Dichloroethane:	ND<5	5			
Trichloroethene:	ND<5	5	128%	75-125	2%
cis-1,3-Dichloropropene:	ND<5	5			
1,2-Dichloropropane:	ND<5	5			
trans-1,3-Dichloropropene:	ND<5	5			
Bromodichloromethane:	ND<5	5			
1,1,2-Trichloroethane:	ND<5	5			
Tetrachloroethene:	ND<5	5			
Dibromochloromethane:	ND<5	5			
Chlorobenzene:	ND<5	5	116%	75-125	1%
Bromoform:	ND<5	5			
1,1,2,2-Tetrachloroeth:	ND<5	5			
1,3-Dichlorobenzene:	ND<5	5			
1,2-Dichlorobenzene:	ND<5	5			
1,4-Dichlorobenzene:	ND<5	5			

### Definitions:

ND = Not Detected  
PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

 7/28/93  
Senior Analyst

File No. 89333



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

SEMCO  
Attn: CHUCK KIPER

Project FALASCHI-GOODYEAR  
Reported 28-July-1993

---

ANALYSIS FOR CADMIUM, CHROMIUM, LEAD, NICKEL, & ZINC  
by EPA Method SW-846 6010

Chronology

Laboratory Number 89333

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Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
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1-550-W-O-10'3"	07/20/93	07/21/93	07/26/93	07/27/93		1
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# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SEMCO  
Attn: CHUCK KIPER

Project FALASCHI-GOODYEAR  
Reported 28-July-1993

---

## ANALYSIS FOR CADMIUM, CHROMIUM, LEAD, NICKEL, & ZINC

---

Laboratory Number	Sample Identification	Matrix
89333- 1	1-550-W-O-10'3"	Soil

---

### RESULTS OF ANALYSIS

Laboratory Number: 89333- 1

---

Cadmium	(Cd):	ND<0.5
Chromium	(Cr):	39
Lead	(Pb):	7
Nickel	(Ni):	38
Zinc	(Zn):	58

Concentration: mg/kg



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

ANALYSIS FOR CADMIUM, CHROMIUM, LEAD, NICKEL, & ZINC  
Quality Assurance and Control Data - Soil

Laboratory Number 89333

Compound		Method Blank (mg/Kg)	PQL (mg/Kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Cadmium	(Cd):	ND<0.5	0.5	97%	75-125	3%
Chromium	(Cr):	ND<5	5	89%	75-125	2%
Lead	(Pb):	ND<5	5	95%	75-125	6%
Nickel	(Ni):	ND<5	5	98%	75-125	4%
Zinc	(Zn):	ND<5	5	96%	75-125	3%

### Definitions:

ND = Not Detected

PQL = Practical Quantitation Limit

QC File No. 89333

RPD = Relative Percent Difference

 7/28/93

Senior Analyst

Laboratory Results

Samples Taken

July 22, 1993



# CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. \_\_\_\_\_

**Section I**

Consultant Name SEMCO  
 Office Location 1741 Leslie Rd. San Mateo, CA 94402  
 Fax No. (415) 572-9734  
 Project Manager Chuck Kiper  
 Phone (415) 572 8033

TURN AROUND TIME  
 (Circle One)  
 Same Day \_\_\_\_\_ 72 Hrs \_\_\_\_\_  
 24 Hrs \_\_\_\_\_ **5 Day** \_\_\_\_\_  
 48 Hrs \_\_\_\_\_

SUPERIOR ANALYTICAL, INC.  
Martinez San Francisco  
415/229-1512 415/647-2081

Send Coolers to : Modesto  San Mateo   
 Project No. / P.O. No. Tim Corbett, (Palaschi) 93-3067

Sampler Semco - Tina Soentgen  
 Regulatory Agency Alameda County - Juliet Shin

**Section II      Analysis Request      Section III      Sample Information**

Sample Identification	S=Soil W=Water Matrix	A=Air	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	O&G	8010	8240	Metals / Cd, Cr, Ni, Pb	Others * Subject to Subcontracting	8270	Date	Time	Containers		Sampling Remarks	
															Quantity	Pres.	Bioremediation	Contamination
1 Re-Ex-Westside wall	S		X			X	X	X		X		X	7/22/93	1105	1	1		
2 -6'													<del>7/22/93</del>	<del>1105</del>	<del>1</del>	<del>1</del>		
3 North Sidewall -6'	S		X			X	X	X		X		X	7/22/93	1105	1	1		
4 South Sidewall 4.5'	S		X			X	X	X		X		X	7/22/93	1109	1	1		
5 East Sidewall -6'	S		X			X	X	X		X		X	7/22/93	1113	1	1		
6 Bottom -11'	S		X			X	X	X		X		X	7/22/93	1121	1	1		
7																		
8																		
9																		
10																		
11																		
12																		

Please Initial: UC

Samples Stored in ice: NA

Appropriate containers: NA

Samples preserved: NA

VOA's without headspace: NA

Comments: \_\_\_\_\_

Received NA

AUG 14 1993

SEMCO

Relinquished by <u>Tina Soentgen</u>	Date/Time <u>7/22/93 12:53</u>	Received by _____	Please Initial <u>PK</u>
Organization <u>SEMCO</u>		Organization _____	Samples Stored in ice <u>NO</u>
Relinquished by _____	Date/Time _____	Received by _____	Appropriate Containers <u>NA</u>
Organization _____		Organization _____	Samples Preserved <u>NA</u>
Relinquished by _____	Date/Time _____	Received by <u>P. Romero</u>	VOA's without Headspace <u>NA</u>
Organization _____		Organization <u>Superior</u>	Comments _____

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. \_\_\_\_\_

**Section I**

Consultant Name SEMCO  
 Office Location 1741 Leslie Rd. San Mateo, CA 94402  
 Fax No. (415) 572-9734  
 Project Manager Chuck Kiper  
 Phone (415) 572 8033

TURN AROUND TIME  
 (Circle One)  
 Same Day \_\_\_\_\_  
 24 Hrs \_\_\_\_\_  
 48 Hrs \_\_\_\_\_  
 72 Hrs \_\_\_\_\_  
 5 Day           

**SUPERIOR ANALYTICAL, INC.**  
Martinez San Francisco  
 415/229-1512 415/647-2081

Send Coolers to : Modesto  San Mateo

Project No. / P.O. No. Tim Corbett, (Palaschi) 93-3067

Sampler Semco - Tina Soentgen  
 Regulatory Agency Alameda County - Juliet Shin

Section II		Analysis Request										Section III		Sample Information			
Sample Identification	S=Soil W=Water Matrix	TPH - G & D <input checked="" type="checkbox"/>	TPH - Low Level D	TPH - G	BTXE <input checked="" type="checkbox"/>	O&G	8010	8240	Metals / Cd, Cr, Ni, Zn, Pb	Others * Subject to	Subcontracting	8270	Date	Time	Containers		Sampling Remarks
															Quantity	Pres.	
1 Re-Ex - West Sidewall	S	X			X	X	X		X		X		7/22/93	11:30	1	-	7/22/93 11:30
2 -6'													<del>7/22/93</del>	<del>11:30</del>			
3 North Sidewall-6'	S	X			X	X	X		X		X		7/22	11:05	1	-	PLEASE Re-RUN
4 South Sidewall 4.5'	S	X			X	X	X		X		X		7/22	11:09	1	-	
5 East Sidewall-6'	S	X			X	X	X		X		X		7/22	11:13	1	-	#1 FOR diesel
6 Bottom - 11'	S	X			X	X	X		X		X		7/22	11:21	1	-	AND O&G #2 FOR diesel
7																	
8																	
9																	
10																	
11																	
12																	

Relinquished by <u>SEMCO</u>	Date/Time <u>7/22/93</u>	Received by _____	Please Initial _____ Samples Stored in Ice _____ Appropriate Containers _____ Samples Preserved _____ VOA's without Headspace _____ Comments _____
Organization <u>SEMCO</u>	Date/Time <u>12:57</u>	Organization _____	
Relinquished by _____	Date/Time _____	Received by _____	
Organization _____	Date/Time _____	Organization _____	
Relinquished by _____	Date/Time _____	Received by _____	
Organization _____	Date/Time _____	Organization _____	

TX.  
Chuck-

8/10/4

Section I

# Chain of Custody and Analysis Request

page \_\_\_ of \_\_\_

From: Superior Precision Analytical, Inc.  
1555 Burke St. Unit I  
San Francisco, CA 92124  
 Phone No. (415) 647-2081 Fax No. (415) 821-7123  
 Contact: Victor Ezbenko  
 P.O. No. 56831

Turn Around Time  
 (circle one)  
 Same Day 72 Hrs  
 24 Hrs 5 Day  
 48 Hrs 10 Day



**Superior Precision Analytical, Inc.**

P.O. Box 1545  
 Martinez, California 94553

Work Subcontracted to: Martinez Lab

Section II: Analysis Request

Laboratory Sample Identification	S = Soil A = Air W = Water Matrix	CAM17	Metals: Cd, Cr, Ni, Zn, Pb	418.1	8270	8080 (pest. and PCB's)	8010	Client Sample Identification	Number of Containers	Preservative (yes or no)	Sampling Remarks	
											<input type="checkbox"/> Chevron	<input checked="" type="checkbox"/> Non-Chevron
1 56831-1	S		X				X	Westside Wall-6'	1	NO	** Please Fax Results ** to Client	
2 -2	S		X				X	Northside Wall-6'	1			
3 -3	S		X				X	Southside Wall-45'	1			
4 -4	S		X				X	Eastside Wall-6'	1			
5 -5	S		X				X	Bottom-11'	1			
6												
7												
8												
9												
10												
11												
12												

Relinquished by <u>Victor Ezbenko</u> Organization <u>Superior</u>	Date/Time <u>7/22 14:30</u>	Received by _____ Organization _____	Date/Time _____	Lab please initial the following: Samples Stored in Ice <u>YES</u> Appropriate Containers <u>YES</u> Samples Preserved <u>NO</u> VOAs without Headspace <u>NA</u> Comments <u>OK</u>
Relinquished by _____ Organization _____	Date/Time _____	Received by _____ Organization _____	Date/Time _____	
Relinquished by _____ Organization _____	Date/Time _____	Received by <u>SPALWITZ</u> Organization <u>SPALWITZ</u>	Date/Time <u>7/23 09:50</u>	



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

SEMCO

AUG 14 1993

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067  
Reported 07/29/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
56831- 1	RE-EX-WESTSIDE WALL-6	07/22/93	07/24/93 Soil
56831- 2	NORTH SIDEWALL-6'	07/22/93	07/24/93 Soil
56831- 3	SOUTH SIDEWALL-4.5'	07/22/93	07/26/93 Soil
56831- 4	EAST SIDEWALL-6'	07/22/93	07/26/93 Soil
56831- 5	BOTTOM-11'	07/22/93	07/26/93 Soil

## RESULTS OF ANALYSIS

Laboratory Number: 56831- 1 56831- 2 56831- 3 56831- 4 56831- 5

Gasoline:	49	17	ND<1	ND<1	ND<1
Benzene:	0.012	ND<.003	ND<.003	ND<.003	ND<.003
Toluene:	0.016	0.012	ND<.003	ND<.003	ND<.003
Ethyl Benzene:	0.12	0.037	ND<.003	ND<.003	ND<.003
Xylenes:	0.12	0.10	ND<.009	ND<.009	ND<.009
Diesel:	1600	1100	ND<10	ND<10	ND<10
Oil and Grease:	170	ND<50	240	ND<50	ND<50
Concentration:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg



C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 56831

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
mg/kg = parts per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Soil: 50mg/kg

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Soil: 10mg/kg

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Soil: 0.003mg/kg

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	91/91	0%	75-125
Benzene:	85/90	6%	75-125
Toluene:	84/90	7%	75-125
Ethyl Benzene:	92/97	5%	75-125
Xylenes:	85/91	7%	75-125
Diesel:	104/114	9%	67-118
Oil and Grease:	80/88	9%	47-97

Richard Srna, Ph.D.

*Cecilia G. Joergensen (for)*  
Laboratory Director



AUG 14 1993

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Received

Falaseh

 SEMCO  
 Attn: CHUCK KIPER

 Project 93-3067  
 Reported 29-July-1993

## METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

## Chronology

Laboratory Number 56831

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
RE-EX-WESTSIDE W	07/22/93	07/22/93	07/28/93	07/28/93		1
NORTH SIDEWALL-6	07/22/93	07/22/93	07/28/93	07/28/93		2
SOUTH SIDEWALL-4	07/22/93	07/22/93	07/28/93	07/28/93		3
EAST SIDEWALL-6'	07/22/93	07/22/93	07/28/93	07/28/93		4
BOTTOM-11'	07/22/93	07/22/93	07/28/93	07/28/93		5

SEMCO  
Attn: CHUCK KIPERProject 93-3067  
Reported 29-July-1993

## METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
56831- 1	RE-EX-WESTSIDE WALL-6'	Soil
56831- 2	NORTH SIDEWALL-6'	Soil
56831- 3	SOUTH SIDEWALL-4.5'	Soil
56831- 4	EAST SIDEWALL-6'	Soil
56831- 5	BOTTOM-11'	Soil

## RESULTS OF ANALYSIS

Laboratory Number: 56831- 1 56831- 2 56831- 3 56831- 4 56831- 5

bis(2-chloroethyl) ethe:	ND<330	ND<330	ND<330	ND<330	ND<330
aniline:	ND<330	ND<330	ND<330	ND<330	ND<330
phenol:	ND<330	ND<330	ND<330	ND<330	ND<330
2-chlorophenol:	ND<330	ND<330	ND<330	ND<330	ND<330
1,3-dichlorobenzene:	ND<330	ND<330	ND<330	ND<330	ND<330
1,4-dichlorobenzene:	ND<330	ND<330	ND<330	ND<330	ND<330
1,2-dichlorobenzene:	ND<330	ND<330	ND<330	ND<330	ND<330
benzyl alcohol:	ND<330	ND<330	ND<330	ND<330	ND<330
bis-(2-chloroisopropyl):	ND<330	ND<330	ND<330	ND<330	ND<330
2-methylphenol:	ND<330	ND<330	ND<330	ND<330	ND<330
hexachloroethane:	ND<330	ND<330	ND<330	ND<330	ND<330
n-nitroso-di-n-propyla:	ND<330	ND<330	ND<330	ND<330	ND<330
4-methylphenol:	ND<330	ND<330	ND<330	ND<330	ND<330
nitrobenzene:	ND<330	ND<330	ND<330	ND<330	ND<330
isophorone:	ND<330	ND<330	ND<330	ND<330	ND<330
2-nitrophenol:	ND<330	ND<330	ND<330	ND<330	ND<330
2,4-dimethylphenol:	ND<330	ND<330	ND<330	ND<330	ND<330
bis(2-chloroethoxy)met:	ND<330	ND<330	ND<330	ND<330	ND<330
2,4-dichlorophenol:	ND<330	ND<330	ND<330	ND<330	ND<330
1,2,4-trichlorobenzene:	ND<330	ND<330	ND<330	ND<330	ND<330
naphthalene:	ND<330	ND<330	ND<330	ND<330	ND<330
benzoic acid:	ND<330	ND<330	ND<330	ND<330	ND<330
4-chloroaniline:	ND<330	ND<330	ND<330	ND<330	ND<330
hexachlorobutadiene:	ND<500	ND<500	ND<500	ND<500	ND<500
4-chloro-3-methylpheno:	ND<330	ND<330	ND<330	ND<330	ND<330
2-methyl-naphthalene:	ND<330	ND<330	ND<330	ND<330	ND<330
hexachlorocyclopentadie:	ND<330	ND<330	ND<330	ND<330	ND<330
2,4,6-trichlorophenol:	ND<330	ND<330	ND<330	ND<330	ND<330
2,4,5-trichlorophenol:	ND<800	ND<800	ND<800	ND<800	ND<800

Concentration: ug/kg ug/kg ug/kg ug/kg ug/kg



AUG 14 1993

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067  
Reported 29-July-1993

METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
56831- 1	RE-EX-WESTSIDE WALL-6'	Soil
56831- 2	NORTH SIDEWALL-6'	Soil
56831- 3	SOUTH SIDEWALL-4.5'	Soil
56831- 4	EAST SIDEWALL-6'	Soil
56831- 5	BOTTOM-11'	Soil

RESULTS OF ANALYSIS

Laboratory Number:	56831- 1	56831- 2	56831- 3	56831- 4	56831- 5
--------------------	----------	----------	----------	----------	----------

2-chloronaphthalene:	ND<330	ND<330	ND<330	ND<330	ND<330
2-nitroaniline:	ND<800	ND<800	ND<800	ND<800	ND<800
acenaphthylene:	ND<330	ND<330	ND<330	ND<330	ND<330
dimethylphthlate:	ND<330	ND<330	ND<330	ND<330	ND<330
2,6-dinitrotoluene:	ND<330	ND<330	ND<330	ND<330	ND<330
acenaphthene:	ND<330	ND<330	ND<330	ND<330	ND<330
3-nitroaniline:	ND<800	ND<800	ND<800	ND<800	ND<800
2,4-dinitrophenol:	ND<800	ND<800	ND<800	ND<800	ND<800
dibenzofuran:	ND<330	ND<330	ND<330	ND<330	ND<330
2,4-dinitrotoluene:	ND<330	ND<330	ND<330	ND<330	ND<330
4-nitrophenol:	ND<800	ND<800	ND<800	ND<800	ND<800
fluorene:	ND<330	ND<330	ND<330	ND<330	ND<330
4-chlorophenyl-phenyle:	ND<330	ND<330	ND<330	ND<330	ND<330
diethylphthlate:	ND<330	ND<330	ND<330	ND<330	ND<330
4-nitroaniline:	ND<800	ND<800	ND<800	ND<800	ND<800
4,6-dinitro-2-methylph:	ND<800	ND<800	ND<800	ND<800	ND<800
n-nitrosodiphenylamine:	ND<330	ND<330	ND<330	ND<330	ND<330
4-bromo-phenyl-phenyle:	ND<330	ND<330	ND<330	ND<330	ND<330
hexachlorobenzene:	ND<330	ND<330	ND<330	ND<330	ND<330
pentachlorophenol:	ND<800	ND<800	ND<800	ND<800	ND<800
phenanthrene:	ND<330	ND<330	ND<330	ND<330	ND<330
anthracene:	ND<330	ND<330	ND<330	ND<330	ND<330
di-n-butylphthlate:	ND<2400	ND<2400	ND<2400	ND<2400	ND<2400
fluoranthene:	ND<330	ND<330	ND<330	ND<330	ND<330
benzidine:	ND<330	ND<330	ND<330	ND<330	ND<330
pyrene:	ND<330	ND<330	ND<330	ND<330	ND<330
butylbenzylphthlate:	ND<330	ND<330	ND<330	ND<330	ND<330
3,3'-dichlorobenzidine:	ND<330	ND<330	ND<330	ND<330	ND<330
benzo[a]anthracene:	ND<330	ND<330	ND<330	ND<330	ND<330

Concentration:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
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SEMCO  
Attn: CHUCK KIPER

Project 93-3067  
Reported 29-July-1993

METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
56831- 1	RE-EX-WESTSIDE WALL-6'	Soil
56831- 2	NORTH SIDEWALL-6'	Soil
56831- 3	SOUTH SIDEWALL-4.5'	Soil
56831- 4	EAST SIDEWALL-6'	Soil
56831- 5	BOTTOM-11'	Soil

RESULTS OF ANALYSIS

Laboratory Number:	56831- 1	56831- 2	56831- 3	56831- 4	56831- 5
chrysene:	ND<330	ND<330	ND<330	ND<330	ND<330
bis(2-ethylhexyl)phtha:	ND<330	ND<330	ND<330	ND<330	ND<330
di-n-octylphthalate:	ND<330	ND<330	ND<330	ND<330	ND<330
benzo(b,k)fluoranthene:	ND<700	ND<700	ND<700	ND<700	ND<700
benzo[a]pyrene:	ND<330	ND<330	ND<330	ND<330	ND<330
indeno[1,2,3-cd]pyrene:	ND<330	ND<330	ND<330	ND<330	ND<330
dibenzo[a,h]anthracene:	ND<330	ND<330	ND<330	ND<330	ND<330
benzo[g,h,i]perylene:	ND<330	ND<330	ND<330	ND<330	ND<330
2-fluorophenol:	89%	76%	81%	80%	79%
phenol-d5:	95%	83%	87%	86%	82%
nitrobenzene-d5:	94%	102%	50%	58%	53%
2-fluorobiphenyl:	64%	79%	47%	53%	50%
2,4,6-tribromophenol:	102%	89%	104%	108%	102%
terphenyl-d14:	87%	89%	94%	90%	94%
Concentration:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

AUG 14 1993

Received



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

 METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
 Quality Assurance and Control Data - Soil

Laboratory Number 56831

Compound	Method Blank (ug/kg)	PQL (ug/kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Bis(2-chloroethyl) ethe:	ND<330	330			
aniline:	ND<330	330			
phenol:	ND<330	330	79%	26-90	3%
2-chlorophenol:	ND<330	330	75%	27-123	12%
1,3-dichlorobenzene:	ND<330	330			
1,4-dichlorobenzene:	ND<330	330	56%	28-104	0%
1,2-dichlorobenzene:	ND<330	330			
benzyl alcohol:	ND<330	330			
bis-(2-chloroisopropyl):	ND<330	330			
2,4-dimethylphenol:	ND<330	330			
hexachloroethane:	ND<330	330			
n-nitroso-di-n-propyla:	ND<330	330	104%	41-126	22%
2,4-dimethylphenol:	ND<330	330			
nitrobenzene:	ND<330	330			
isophorone:	ND<330	330			
2-nitrophenol:	ND<330	330			
1,4-dimethylphenol:	ND<330	330			
bis(2-chloroethoxy)met:	ND<330	330			
2,4-dichlorophenol:	ND<330	330			
1,2,4-trichlorobenzene:	ND<330	330	72%	38-107	7%
naphthalene:	ND<330	330			
benzoic acid:	ND<330	330			
2-chloroaniline:	ND<330	330			
hexachlorobutadiene:	ND<500	500			
4-chloro-3-methylpheno:	ND<330	330	59%	26-103	22%
2-methyl-naphthalene:	ND<330	330			
hexachlorocyclopentadie:	ND<330	330			
2,4,6-trichlorophenol:	ND<330	330			
2,4,5-trichlorophenol:	ND<800	800			



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METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 56831

Compound	Method Blank (ug/kg)	PQL (ug/kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<330	330			
2-nitroaniline:	ND<800	800			
acenaphthylene:	ND<330	330			
dimethylphthlate:	ND<330	330			
2,6-dinitrotoluene:	ND<330	330			
acenaphthene:	ND<330	330	94%	31-137	13%
3-nitroaniline:	ND<800	800			
2,4-dinitrophenol:	ND<800	800			
dibenzofuran:	ND<330	330			
2,4-dinitrotoluene:	ND<330	330	71%	28-89	21%
4-nitrophenol:	ND<800	800	53%	11-114	29%
fluorene:	ND<330	330			
4-chlorophenyl-phenyle:	ND<330	330			
diethylphthlate:	ND<330	330			
4-nitroaniline:	ND<800	800			
2,6-dinitro-2-methylph:	ND<800	800			
p-nitrosodiphenylamine:	ND<330	330			
4-bromo-phenyl-phenyle:	ND<330	330			
hexachlorobenzene:	ND<330	330			
pentachlorophenol:	ND<800	800	40%	17-109	28%
phenanthrene:	ND<330	330			
anthracene:	ND<330	330			
di-n-butylphthlate:	ND<2400	2400			
fluoranthene:	ND<330	330			
benzidine:	ND<330	330			
pyrene:	ND<330	330	99%	35-142	11%
butylbenzylphthlate:	ND<330	330			
3,3'-dichlorobenzidine:	ND<330	330			
benzo[a]anthracene:	ND<330	330			



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SEMCO

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Received

METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 56831

Compound	Method Blank (ug/kg)	PQL (ug/kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Chrysene:	ND<330	330			
bis(2-ethylhexyl)phtha:	ND<330	330			
di-n-octylphthalate:	ND<330	330			
benzo(b,k)fluoranthene:	ND<700	700			
benzo[a]pyrene:	ND<330	330			
indeno[1,2,3-cd]pyrene:	ND<330	330			
tribenzo[a,h]anthracene:	ND<330	330			
benzo[g,h,i]perylene:	ND<330	330			
2-fluorophenol:	96%				
phenol-d5:	91%				
nitrobenzene-d5:	98%				
2-fluorobiphenyl:	103%				
2,4,6-tribromophenol:	92%				
terphenyl-d14:	106%				

### Definitions:

ND = Not Detected

PQL = Practical Quantitation Limit

QC File No. 56831

RPD = Relative Percent Difference

*Cecilia G. Joagund*  
 \_\_\_\_\_  
 Senior Analyst



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SEMCO  
Attn: Chuck Kiper

Project 93-3067  
Reported 29-July-1993

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ANALYSIS FOR CADMIUM, CHROMIUM, LEAD, NICKEL, & ZINC  
by EPA Method SW-846 6010

Chronology

Laboratory Number 89341

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
RE-EX-WESTSIDEWA	07/22/93	07/22/93	07/26/93	07/27/93		1
NORTHSIDEWALL-6'	07/22/93	07/22/93	07/26/93	07/27/93		2
SOUTHSIDEWALL-4.5'	07/22/93	07/22/93	07/26/93	07/27/93		3
EASTSIDEWALL-6'	07/22/93	07/22/93	07/26/93	07/27/93		4
BOTTOM-11'	07/22/93	07/22/93	07/26/93	07/27/93		5



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SEMCO  
Attn: Chuck Kiper

Project 93-3067  
Reported 29-July-1993

## ANALYSIS FOR CADMIUM, CHROMIUM, LEAD, NICKEL, & ZINC

Laboratory Number	Sample Identification	Matrix
89341- 1	RE-EX-WESTSIDEWALL-6'	Soil
89341- 2	NORTHSIDEWALL-6'	Soil
89341- 3	SOUTHSIDEWALL-4.5'	Soil
89341- 4	EASTSIDEWALL-6'	Soil
89341- 5	BOTTOM-11'	Soil

### RESULTS OF ANALYSIS

Laboratory Number:	89341- 1	89341- 2	89341- 3	89341- 4	89341- 5
Cadmium (Cd):	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Chromium (Cr):	53	42	40	46	22
Lead (Pb):	8	ND<5	6	ND<5	5
Nickel (Ni):	95	65	61	60	24
Zinc (Zn):	50	40	31	31	23
Concentration:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

## ANALYSIS FOR CADMIUM, CHROMIUM, LEAD, NICKEL, & ZINC Quality Assurance and Control Data - Soil

Laboratory Number 89341

Compound		Method Blank (mg/Kg)	PQL (mg/Kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Cadmium	(Cd):	ND<0.5	0.5	97%	75-125	3%
Chromium	(Cr):	ND<5	5	89%	75-125	2%
Lead	(Pb):	ND<5	5	95%	75-125	6%
Nickel	(Ni):	ND<5	5	98%	75-125	4%
Zinc	(Zn):	ND<5	5	96%	75-125	3%

### Definitions:

ND = Not Detected

PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

File No. 89341

*Sayed Syed*  
 Senior Analyst



# Superior Precision Analytical, Inc.

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SEMCO  
Attn: Chuck Kiper

Project 93-3067  
Reported 30-July-1993

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

## Chronology

Laboratory Number 89341

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
RE-EX-WESTSIDEWA	07/22/93	07/22/93	07/29/93	07/29/93		1
NORTHSIDEWALL-6'	07/22/93	07/22/93	07/29/93	07/29/93		2
SOUTHSIDEWALL-4.5'	07/22/93	07/22/93	07/29/93	07/29/93		3
EASTSIDEWALL-6'	07/22/93	07/22/93	07/29/93	07/29/93		4
BOTTOM-11'	07/22/93	07/22/93	07/29/93	07/29/93		5





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SEMCO  
Attn: Chuck Kiper

Project 93-3067  
Reported 30-July-1993

## HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Laboratory Number	Sample Identification	Matrix
89341- 1	RE-EX-WESTSIDEWALL-6'	Soil
89341- 2	NORTHSIDEWALL-6'	Soil
89341- 3	SOUTHSIDEWALL-6'	Soil
89341- 4	EASTSIDEWALL-4.5'	Soil
89341- 5	BOTTOM-11'	Soil

### RESULTS OF ANALYSIS

Laboratory Number:	89341- 1	89341- 2	89341- 3	89341- 4	89341- 5
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Chloromethane/Vinyl Cl:	ND<10	ND<10	ND<10	ND<10	ND<10
Bromomethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Chloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Trichlorofluoromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1-Dichloroethene:	ND<5	ND<5	ND<5	ND<5	ND<5
Dichloromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
t-1,2-Dichloroethene:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1-Dichloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
c-1,2-Dichloroethene:	ND<5	ND<5	ND<5	ND<5	ND<5
Chloroform:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1,1-Trichloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Carbon tetrachloride:	ND<5	ND<5	ND<5	ND<5	ND<5
1,2-Dichloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Trichloroethene:	ND<5	ND<5	ND<5	ND<5	ND<5
c-1,3-Dichloropropene:	ND<5	ND<5	ND<5	ND<5	ND<5
1,2-Dichloropropane:	ND<5	ND<5	ND<5	ND<5	ND<5
t-1,3-Dichloropropene:	ND<5	ND<5	ND<5	ND<5	ND<5
Bromodichloromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1,2-Trichloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Tetrachloroethene:	ND<5	ND<5	ND<5	ND<5	ND<5
Dibromochloromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Chlorobenzene:	ND<5	ND<5	ND<5	ND<5	ND<5
Bromoform:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1,2,2-Tetrachloroeth:	ND<5	ND<5	ND<5	ND<5	ND<5
1,3-Dichlorobenzene:	ND<5	ND<5	ND<5	ND<5	ND<5
1,2-Dichlorobenzene:	ND<5	ND<5	ND<5	ND<5	ND<5
1,4-Dichlorobenzene:	ND<5	ND<5	ND<5	ND<5	ND<5

Concentration:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
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# Superior Precision Analytical, Inc.

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HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.  
Quality Assurance and Control Data - Soil

Laboratory Number 89341


Compound	Method Blank (ug/Kg)	PQL (ug/Kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane/Vinyl Cl:	ND<10	10			
Bromomethane:	ND<5	5			
Chloroethane:	ND<5	5			
Trichlorofluoromethane:	ND<5	5			
1,1-Dichloroethene:	ND<5	5	96%	75-125	6%
Dichloromethane:	ND<5	5			
1,2-Dichloroethene:	ND<5	5			
1,1-Dichloroethane:	ND<5	5			
c-1,2-Dichloroethene:	ND<5	5			
Chloroform:	ND<5	5			
1,1,1-Trichloroethane:	ND<5	5			
Carbon tetrachloride:	ND<5	5			
1,2-Dichloroethane:	ND<5	5			
Trichloroethene:	ND<5	5	108%	75-125	5%
c-1,3-Dichloropropene:	ND<5	5			
1,2-Dichloropropane:	ND<5	5			
1,3-Dichloropropene:	ND<5	5			
Bromodichloromethane:	ND<5	5			
1,1,2-Trichloroethane:	ND<5	5			
Tetrachloroethene:	ND<5	5			
Bromochloromethane:	ND<5	5			
Chlorobenzene:	ND<5	5	104%	75-125	3%
Bromoform:	ND<5	5			
1,1,2,2-Tetrachloroeth:	ND<5	5			
1,3-Dichlorobenzene:	ND<5	5			
1,2-Dichlorobenzene:	ND<5	5			
1,4-Dichlorobenzene:	ND<5	5			

### Definitions:

ND = Not Detected  
PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

Lab File No. 89341

  
Senior Analyst

Laboratory Results

Samples Taken

July 23, 1993

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

56844

LAB NO. \_\_\_\_\_

**Section I**

Consultant Name SEMCO  
 Office Location 1741 Leslie Rd. San Mateo, CA 94402  
 Fax No. (415) 572-9734  
 Project Manager Chuck Kiper  
 Phone (415) 572 8033  
 Send Coolers to : Modesto  San Mateo   
 Project No. / P.O. No. 93-3067- Falaschi

TURN AROUND TIME  
 (Circle One)  
 Same Day \_\_\_\_\_  
 24 Hrs \_\_\_\_\_  
 48 Hrs \_\_\_\_\_  
 72 Hrs \_\_\_\_\_  
 5 Day 5 Day

SUPERIOR ANALYTICAL, INC.  
 Martinez San Francisco  
 415/229-1512 415/647-2081

Sampler SEMCO-Tinas  
 Regulatory Agency Alameda County

Section IIAnalysis RequestSection IIISample Information

Sample Identification	S=Soil W=Water Matrix	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	O&G	8010	8240	Metals	Others * Subject to Subcontracting	RCI	8270	SILICAM 17	Date	Time	Containers		Sampling Remarks		
																Quantity	Pres.	Bioremediation	Contamination	
1 Comp 1 A,B,C,D	S					X		X			X	X	X	7/23/93	4	1			Comp to 1	
2 Comp 2 A,B,C,D	↓					X		X			X	X	X	↓	↓	↓	↓			Comp to 1
3 Comp 3 A,B,C,D	↓					X		X			X	X	X	↓	↓	↓	↓			Comp to 1
4 Comp 4 A,B,C,D	↓					X		X			X	X	X	↓	↓	↓	↓			Comp to 1
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

AUG 25 1993  
 Received  
 SEMCO

Relinquished by <u>[Signature]</u>	Date/Time <u>7/23/93</u>	Received by <u>[Signature]</u>	Date/Time <u>7/23/93</u>	Please Initial _____ Samples Stored in Ice _____ Appropriate Containers _____ Samples Preserved _____ VOA's without Headspace _____ Comments _____
Organization <u>SEMCO</u>	<u>2:52</u>	Organization <u>AERO</u>	<u>2:52</u>	
Relinquished by <u>[Signature]</u>	Date/Time <u>7/27/93</u>	Received by _____	Date/Time _____	
Organization <u>AERO</u>	<u>4:10</u>	Organization _____	_____	
Relinquished by _____	Date/Time _____	Received by <u>[Signature]</u>	Date/Time _____	
Organization _____	_____	Organization <u>Superior</u>	<u>7/23/93</u>	



# Superior Precision Analytical, Inc.

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SEMCO

AUG 25 1993

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067  
Reported 30-July-1993

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## METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

### Chronology

Laboratory Number 56844

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP 1-A,B,C,D	07/23/93	07/23/93	07/28/93	07/28/93		1
COMP 2-A,B,C,D	07/23/93	07/23/93	07/28/93	07/28/93		2
COMP 3-A,B,C,D	07/23/93	07/23/93	07/28/93	07/28/93		3
COMP 4-A,B,C,D	07/23/93	07/23/93	07/28/93	07/28/93		4

SEMCO  
Attn: CHUCK KIPERProject 93-3067  
Reported 30-July-1993

## METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
56844- 1	COMP 1-A,B,C,D	Soil
56844- 2	COMP 2-A,B,C,D	Soil
56844- 3	COMP 3-A,B,C,D	Soil
56844- 4	COMP 4-A,B,C,D	Soil

## RESULTS OF ANALYSIS

Laboratory Number:	56844- 1	56844- 2	56844- 3	56844- 4
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bis(2-chloroethyl)ethane:	ND<33000	ND<330	ND<33000	ND<330
aniline:	ND<33000	ND<330	ND<33000	ND<330
phenol:	ND<33000	ND<330	ND<33000	ND<330
2-chlorophenol:	ND<33000	ND<330	ND<33000	ND<330
1,3-dichlorobenzene:	ND<33000	ND<330	ND<33000	ND<330
1,4-dichlorobenzene:	ND<33000	ND<330	ND<33000	ND<330
1,2-dichlorobenzene:	ND<33000	ND<330	ND<33000	ND<330
benzyl alcohol:	ND<33000	ND<330	ND<33000	ND<330
bis-(2-chloroisopropyl)amine:	ND<33000	ND<330	ND<33000	ND<330
2-methylphenol:	ND<33000	ND<330	ND<33000	ND<330
hexachloroethane:	ND<33000	ND<330	ND<33000	ND<330
n-nitroso-di-n-propylamine:	ND<33000	ND<330	ND<33000	ND<330
4-methylphenol:	ND<33000	ND<330	ND<33000	ND<330
nitrobenzene:	ND<33000	ND<330	ND<33000	ND<330
isophorone:	ND<33000	ND<330	ND<33000	ND<330
2-nitrophenol:	ND<33000	ND<330	ND<33000	ND<330
2,4-dimethylphenol:	ND<33000	ND<330	ND<33000	ND<330
bis(2-chloroethoxy)methane:	ND<33000	ND<330	ND<33000	ND<330
2,4-dichlorophenol:	ND<33000	ND<330	ND<33000	ND<330
1,2,4-trichlorobenzene:	ND<33000	ND<330	ND<33000	ND<330
naphthalene:	ND<33000	ND<330	ND<33000	ND<330
benzoic acid:	ND<33000	ND<330	ND<33000	ND<330
4-chloroaniline:	ND<33000	ND<330	ND<33000	ND<330
hexachlorobutadiene:	ND<50000	ND<500	ND<50000	ND<500
4-chloro-3-methylphenol:	ND<33000	ND<330	ND<33000	ND<330
2-methyl-naphthalene:	ND<33000	ND<330	ND<33000	ND<330
hexachlorocyclopentadiene:	ND<33000	ND<330	ND<33000	ND<330
2,4,6-trichlorophenol:	ND<33000	ND<330	ND<33000	ND<330
2,4,5-trichlorophenol:	ND<80000	ND<800	ND<80000	ND<800

Concentration:	ug/kg	ug/kg	ug/kg	ug/kg
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AUG 25 1993

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067  
Reported 30-July-1993

METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
56844- 1	COMP 1-A,B,C,D	Soil
56844- 2	COMP 2-A,B,C,D	Soil
56844- 3	COMP 3-A,B,C,D	Soil
56844- 4	COMP 4-A,B,C,D	Soil

RESULTS OF ANALYSIS

Laboratory Number:	56844- 1	56844- 2	56844- 3	56844- 4
--------------------	----------	----------	----------	----------

2-chloronaphthalene:	ND<33000	ND<330	ND<33000	ND<330
2-nitroaniline:	ND<80000	ND<800	ND<80000	ND<800
acenaphthylene:	ND<33000	ND<330	ND<33000	ND<330
dimethylphthlate:	ND<33000	ND<330	ND<33000	ND<330
2,6-dinitrotoluene:	ND<33000	ND<330	ND<33000	ND<330
acenaphthene:	ND<33000	ND<330	ND<33000	ND<330
3-nitroaniline:	ND<80000	ND<800	ND<80000	ND<800
2,4-dinitrophenol:	ND<80000	ND<800	ND<80000	ND<800
dibenzofuran:	ND<33000	ND<330	ND<33000	ND<330
2,4-dinitrotoluene:	ND<33000	ND<330	ND<33000	ND<330
4-nitrophenol:	ND<80000	ND<800	ND<80000	ND<800
fluorene:	ND<33000	ND<330	ND<33000	ND<330
4-chlorophenyl-phenyle:	ND<33000	ND<330	ND<33000	ND<330
diethylphthlate:	ND<33000	ND<330	ND<33000	ND<330
4-nitroaniline:	ND<80000	ND<800	ND<80000	ND<800
4,6-dinitro-2-methylph:	ND<80000	ND<800	ND<80000	ND<800
n-nitrosodiphenylamine:	ND<33000	ND<330	ND<33000	ND<330
4-bromo-phenyl-phenyle:	ND<33000	ND<330	ND<33000	ND<330
hexachlorobenzene:	ND<33000	ND<330	ND<33000	ND<330
pentachlorophenol:	ND<80000	ND<800	ND<80000	ND<800
phenanthrene:	ND<33000	ND<330	ND<33000	ND<330
anthracene:	ND<33000	ND<330	ND<33000	ND<330
di-n-butylphthlate:	ND<240000	ND<2400	ND<240000	ND<2400
fluoranthene:	ND<33000	ND<330	ND<33000	ND<330
benzidine:	ND<33000	ND<330	ND<33000	ND<330
pyrene:	ND<33000	ND<330	ND<33000	ND<330
butylbenzylphthlate:	ND<33000	ND<330	ND<33000	ND<330
3,3'-dichlorobenzidine:	ND<33000	ND<330	ND<33000	ND<330
benzo[a]anthracene:	ND<33000	ND<330	ND<33000	ND<330

Concentration:	ug/kg	ug/kg	ug/kg	ug/kg
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# Superior Precision Analytical, Inc.

SEMCO

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AUG 25 1993

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067  
Reported 30-July-1993

## METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS

Laboratory Number	Sample Identification	Matrix
56844- 1	COMP 1-A,B,C,D	Soil
56844- 2	COMP 2-A,B,C,D	Soil
56844- 3	COMP 3-A,B,C,D	Soil
56844- 4	COMP 4-A,B,C,D	Soil

### RESULTS OF ANALYSIS

Laboratory Number:	56844- 1	56844- 2	56844- 3	56844- 4
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chrysene:	ND<33000	ND<330	ND<33000	ND<330
bis(2-ethylhexyl) phtha:	ND<33000	ND<330	ND<33000	ND<330
di-n-octylphthalate:	ND<33000	ND<330	ND<33000	ND<330
benzo(b,k) fluoranthene:	ND<70000	ND<700	ND<70000	ND<700
benzo[a]pyrene:	ND<33000	ND<330	ND<33000	ND<330
indeno[1,2,3-cd]pyrene:	ND<33000	ND<330	ND<33000	ND<330
dibenzo[a,h]anthracene:	ND<33000	ND<330	ND<33000	ND<330
benzo[g,h,i]perylene:	ND<33000	ND<330	ND<33000	ND<330
2-fluorophenol:	**%	85%	**%	85%
phenol-d5:	**%	88%	**%	84%
nitrobenzene-d5:	**%	60%	**%	40%
2-fluorobiphenyl:	**%	77%	**%	43%
2,4,6-tribromophenol:	**%	108%	**%	98%
terphenyl-d14:	**%	102%	**%	80%
Concentration:	ug/kg	ug/kg	ug/kg	ug/kg

\*\*SURROGATES DILUTED OUT





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METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Received

Laboratory Number 56844

Compound	Method Blank (ug/kg)	PQL (ug/kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
bis(2-chloroethyl) ethe:	ND<330	330			
aniline:	ND<330	330			
phenol:	ND<330	330	79%	26-90	3%
2-chlorophenol:	ND<330	330	75%	27-123	12%
1,3-dichlorobenzene:	ND<330	330			
1,4-dichlorobenzene:	ND<330	330	56%	28-104	0%
1,2-dichlorobenzene:	ND<330	330			
benzyl alcohol:	ND<330	330			
bis-(2-chloroisopropyl):	ND<330	330			
2-methylphenol:	ND<330	330			
hexachloroethane:	ND<330	330			
n-nitroso-di-n-propyla:	ND<330	330	104%	41-126	22%
2-methylphenol:	ND<330	330			
nitrobenzene:	ND<330	330			
isophorone:	ND<330	330			
2-nitrophenol:	ND<330	330			
1,4-dimethylphenol:	ND<330	330			
bis(2-chloroethoxy)met:	ND<330	330			
1,4-dichlorophenol:	ND<330	330			
1,2,4-trichlorobenzene:	ND<330	330	72%	38-107	7%
naphthalene:	ND<330	330			
benzoic acid:	ND<330	330			
2-chloroaniline:	ND<330	330			
hexachlorobutadiene:	ND<500	500			
4-chloro-3-methylpheno:	ND<330	330	59%	26-103	22%
2-methyl-naphthalene:	ND<330	330			
hexachlorocyclopentadie:	ND<330	330			
2,4,6-trichlorophenol:	ND<330	330			
2,4,5-trichlorophenol:	ND<800	800			



AUG 25 1993

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METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS  
Quality Assurance and Control Data - Soil

Laboratory Number 56844

Compound	Method Blank (ug/kg)	PQL (ug/kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
2-chloronaphthalene:	ND<330	330			
2-nitroaniline:	ND<800	800			
acenaphthylene:	ND<330	330			
dimethylphthlate:	ND<330	330			
2,6-dinitrotoluene:	ND<330	330			
acenaphthene:	ND<330	330	94%	31-137	13%
2-nitroaniline:	ND<800	800			
2,4-dinitrophenol:	ND<800	800			
dibenzofuran:	ND<330	330			
2,4-dinitrotoluene:	ND<330	330	71%	28-89	21%
4-nitrophenol:	ND<800	800	53%	11-114	29%
fluorene:	ND<330	330			
2-chlorophenyl-phenyle:	ND<330	330			
diethylphthlate:	ND<330	330			
4-nitroaniline:	ND<800	800			
2,6-dinitro-2-methylph:	ND<800	800			
1-nitrosodiphenylamine:	ND<330	330			
4-bromo-phenyl-phenyle:	ND<330	330			
hexachlorobenzene:	ND<330	330			
pentachlorophenol:	ND<800	800	40%	17-109	28%
phenanthrene:	ND<330	330			
anthracene:	ND<330	330			
1-n-butylphthlate:	ND<2400	2400			
fluoranthene:	ND<330	330			
benzidine:	ND<330	330			
pyrene:	ND<330	330	99%	35-142	11%
butylbenzylphthlate:	ND<330	330			
3,3'-dichlorobenzidine:	ND<330	330			
benzo[a]anthracene:	ND<330	330			



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## METHOD 8270 SEMIVOLATILE ORGANICS BY GC/MS Quality Assurance and Control Data - Soil

Laboratory Number 56844

Compound	Method Blank (ug/kg)	PQL (ug/kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
chrysene:	ND<330	330			
bis(2-ethylhexyl) phtha:	ND<330	330			
di-n-octylphthalate:	ND<330	330			
benzo(b,k)fluoranthene:	ND<700	700			
benzo[a]pyrene:	ND<330	330			
indeno[1,2,3-cd]pyrene:	ND<330	330			
tribenzo[a,h]anthracene:	ND<330	330			
benzo[g,h,i]perylene:	ND<330	330			
2-fluorophenol:			96%		
phenol-d5:			91%		
nitrobenzene-d5:			98%		
2-fluorobiphenyl:			103%		
2,4,6-tribromophenol:			92%		
terphenyl-d14:			106%		

### Definitions:

ND = Not Detected

PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

File No. 56844

*Cecilia G. Joaquin*  
 Senior Analyst

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## C E R T I F I C A T E   O F   A N A L Y S I S

LABORATORY NO.: 56844  
CLIENT: SEMCO  
CLIENT PROJECT NO.: 93-3067

DATE RECEIVED: 07/23/93  
DATE REPORTED: 07/30/93

Following is a list of Cross referenced Lab Numbers and Sample I.D.'s for referring to the following reports.

Superior Lab Number	Subbed Lab Number	Customer Sample Identification
56844-1	9307228-01	COMP 1 A,B,C,D
56844-2	9307228-02	COMP 2 A,B,C,D
56844-3	9307228-03	COMP 3 A,B,C,D
56844-4	9307228-04	COMP 4 A,B,C,D

Subbed to: CLAYTON ENVIRONMENTAL



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SEMCO  
Attn: CHUCK KIPERProject 93-3067  
Reported 07/30/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
56844- 1	COMP 1-A, B, C, D	07/23/93	07/28/93 Soil
56844- 2	COMP 2-A, B, C, D	07/23/93	07/28/93 Soil
56844- 3	COMP 3-A, B, C, D	07/23/93	07/28/93 Soil
56844- 4	COMP 4-A, B, C, D	07/23/93	07/28/93 Soil

## RESULTS OF ANALYSIS

Laboratory Number: 56844- 1 56844- 2 56844- 3 56844- 4

Oil and Grease:	83	93	220	ND<50
Concentration:	mg/kg	mg/kg	mg/kg	mg/kg

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C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 56844

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
mg/kg = parts per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Soil: 50mg/kg

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Soil: 1mg/kg

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Soil: 0.003mg/kg

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
-----	-----	---	-----
Oil and Grease:	62/54	14%	75-125

Richard Srna, Ph.D.

*Cecilia Y. Joaquin (for)*  
Laboratory Director



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 Project 93-3067  
 Reported 30-July-1993

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 EPA SW-846 METHOD 8240 - VOLATILE ORGANICS  
 by GAS CHROMATOGRAPHY - MASS SPECTROMETRY

## Chronology

Laboratory Number 56844

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP 1-A,B,C,D	07/23/93	07/23/93	/ /	07/25/93		1
COMP 2-A,B,C,D	07/23/93	07/23/93	/ /	07/25/93		2
COMP 3-A,B,C,D	07/23/93	07/23/93	/ /	07/25/93		3
COMP 4-A,B,C,D	07/23/93	07/23/93	/ /	07/25/93		4

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Attn: CHUCK KIPERProject 93-3067  
Reported 30-July-1993

## EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
56844- 1	COMP 1-A,B,C,D	Soil
56844- 2	COMP 2-A,B,C,D	Soil
56844- 3	COMP 3-A,B,C,D	Soil
56844- 4	COMP 4-A,B,C,D	Soil

## RESULTS OF ANALYSIS

Laboratory Number: 56844- 1 56844- 2 56844- 3 56844- 4

Chloromethane:	ND<50	ND<50	ND<50	ND<50
Bromomethane:	ND<50	ND<50	ND<50	ND<50
Vinyl Chloride:	ND<50	ND<50	ND<50	ND<50
Chloroethane:	ND<50	ND<50	ND<50	ND<50
Methylene Chloride:	ND<50	ND<50	ND<50	ND<50
Acetone:	ND<50	ND<50	ND<50	ND<50
Carbon Disulfide:	ND<15	ND<15	ND<15	ND<15
Trichlorofluoromethane:	ND<15	ND<15	ND<15	ND<15
1,1-Dichloroethene:	ND<15	ND<15	ND<15	ND<15
1,1-Dichloroethane:	ND<15	ND<15	ND<15	ND<15
t-1,2-Dichloroethene:	ND<15	ND<15	ND<15	ND<15
Chloroform:	ND<15	ND<15	ND<15	ND<15
1,2-Dichloroethane:	ND<5	ND<5	ND<5	ND<5
2-Butanone:	ND<100	ND<100	ND<100	ND<100
1,1,1-Trichloroethane:	ND<15	ND<15	ND<15	ND<15
Carbon tetrachloride:	ND<15	ND<15	ND<15	ND<15
Vinyl Acetate:	ND<50	ND<50	ND<50	ND<50
Bromodichloromethane:	ND<15	ND<15	ND<15	ND<15
1,2-Dichloropropane:	ND<15	ND<15	ND<15	ND<15
c-1,2-Dichloroethene:	ND<15	ND<15	ND<15	ND<15
c-1,3-Dichloropropene:	ND<15	ND<15	ND<15	ND<15
Trichloroethene:	ND<15	ND<15	ND<15	ND<15
Dibromochloromethane:	ND<15	ND<15	ND<15	ND<15
1,1,2-Trichloroethane:	ND<15	ND<15	ND<15	ND<15
Benzene:	ND<5	ND<5	ND<5	ND<5
t-1,3-Dichloropropene:	ND<15	ND<15	ND<15	ND<15
2-Chloroethyl Vinyl Et:	ND<15	ND<15	ND<15	ND<15
Bromoform:	ND<15	ND<15	ND<15	ND<15
4-Methyl-2-Pentanone:	ND<50	ND<50	ND<50	ND<50

Concentration: ug/kg ug/kg ug/kg ug/kg



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Project 93-3067  
Reported 30-July-1993

## EPA SW-846 METHOD 8240 - VOLATILE ORGANICS

Laboratory Number	Sample Identification	Matrix
56844- 1	COMP 1-A,B,C,D	Soil
56844- 2	COMP 2-A,B,C,D	Soil
56844- 3	COMP 3-A,B,C,D	Soil
56844- 4	COMP 4-A,B,C,D	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 56844- 1 56844- 2 56844- 3 56844- 4

2-Hexanone:	ND<50	ND<50	ND<50	ND<50
Tetrachloroethene:	ND<15	ND<15	ND<15	ND<15
1,1,2,2-Tetracl-ethane:	ND<15	ND<15	ND<15	ND<15
Toluene:	ND<15	ND<15	ND<15	ND<15
Chlorobenzene:	ND<15	ND<15	ND<15	ND<15
Ethyl Benzene:	ND<15	ND<15	ND<15	ND<15
Styrene:	ND<15	ND<15	ND<15	ND<15
Xylenes:	ND<15	ND<15	ND<15	ND<15
1,3-Dichlorobenzene:	ND<15	ND<15	ND<15	ND<15
1,4-Dichlorobenzene:	ND<15	ND<15	ND<15	ND<15
1,2-Dichlorobenzene:	ND<15	ND<15	ND<15	ND<15
1,2-Dichloroethane-d4:	101%	95%	100%	92%
Toluene-d8:	102%	102%	102%	102%
Bromofluorobenzene:	100%	100%	99%	96%
Concentration:	ug/kg	ug/kg	ug/kg	ug/kg



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## EPA SW-846 METHOD 8240 - VOLATILE ORGANICS Quality Assurance and Control Data - Soil

Laboratory Number 56844

Compound	Method Blank (ug/kg)	PQL (ug/kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane:	ND<50	50			
Bromomethane:	ND<50	50			
Vinyl Chloride:	ND<50	50			
Chloroethane:	ND<50	50			
Methylene Chloride:	ND<50	50			
Acetone:	ND<50	50			
Carbon Disulfide:	ND<15	15			
Trichlorofluoromethane:	ND<15	15			
1,1-Dichloroethene:	ND<15	15	99%	59-172	0%
1,1-Dichloroethane:	ND<15	15			
trans-1,2-Dichloroethene:	ND<15	15			
Chloroform:	ND<15	15			
1,2-Dichloroethane:	ND<5	5			
2-Butanone:	ND<100	100			
1,1,1-Trichloroethane:	ND<15	15			
Carbon tetrachloride:	ND<15	15			
Vinyl Acetate:	ND<50	50			
Bromodichloromethane:	ND<15	15			
1,2-Dichloropropane:	ND<15	15			
trans-1,2-Dichloroethene:	ND<15	15			
cis-1,3-Dichloropropene:	ND<15	15			
Trichloroethene:	ND<15	15	91%	62-137	1%
Bromochloromethane:	ND<15	15			
1,1,2-Trichloroethane:	ND<15	15			
Benzene:	ND<5	5	90%	66-142	1%
trans-1,3-Dichloropropene:	ND<15	15			
2-Chloroethyl Vinyl Et:	ND<15	15			
Bromoform:	ND<15	15			
1-Methyl-2-Pentanone:	ND<50	50			

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EPA SW-846 METHOD 8240 - VOLATILE ORGANICS  
Quality Assurance and Control Data - Soil

Laboratory Number 56844

Compound	Method		Average Spike Recovery (%)	Limits (%)	RPD (%)
	Blank (ug/kg)	PQL (ug/kg)			
2-Hexanone:	ND<50	50			
Tetrachloroethene:	ND<15	15			
1,1,2,2-Tetracl-ethane:	ND<15	15			
Toluene:	ND<15	15	88%	59-139	0%
Chlorobenzene:	ND<15	15	95%	60-133	1%
Ethyl Benzene:	ND<15	15			
Styrene:	ND<15	15			
Xylenes:	ND<15	15			
1,3-Dichlorobenzene:	ND<15	15			
1,4-Dichlorobenzene:	ND<15	15			
1,2-Dichlorobenzene:	ND<15	15			
1,2-Dichloroethane-d4:	97%				
Toluene-d8:	102%				
Bromofluorobenzene:	98%				

Definitions:

ND = Not Detected  
PQL = Practical Quantitation Limit

File No. 56844

RPD = Relative Percent Difference

*Cecilia G. Joagun*  
Senior Analyst



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SEMCO  
Attn: CHUCK KIPER

Project 93-3067  
Reported 30-July-1993

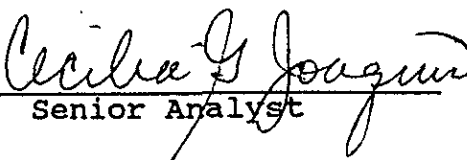
### pH by EPA Method 150.1

Laboratory Number	Sample Identification	Sampled	Analyzed	Matrix
56844- 1	COMP 1-A,B,C,D	07/23/93	07/29/93	Soil
56844- 2	COMP 2-A,B,C,D	07/23/93	07/29/93	Soil
56844- 3	COMP 3-A,B,C,D	07/23/93	07/29/93	Soil
56844- 4	COMP 4-A,B,C,D	07/23/93	07/29/93	Soil

### RESULTS OF ANALYSIS

Laboratory Number:    56844- 1    56844- 2    56844- 3    56844- 4

PH:                            9.8                            7.0                            7.6                            7.6

  
Senior Analyst

'AUG 25 1993



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## FLASHPOINT BY EPA METHOD 1010

### Chronology

Laboratory Number 56844

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP 1-A, B, C, D	07/23/93	07/23/93	/ /	07/29/93		1
COMP 2-A, B, C, D	07/23/93	07/23/93	/ /	07/29/93		2
COMP 3-A, B, C, D	07/23/93	07/23/93	/ /	07/29/93		3
COMP 4-A, B, C, D	07/23/93	07/23/93	/ /	07/29/93		4



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Project 93-3067  
Reported 30-July-1993

## FLASHPOINT BY EPA METHOD

Laboratory Number	Sample Identification	Matrix
56844- 1	COMP 1-A,B,C,D	Soil
56844- 2	COMP 2-A,B,C,D	Soil
56844- 3	COMP 3-A,B,C,D	Soil
56844- 4	COMP 4-A,B,C,D	Soil

## RESULTS OF ANALYSIS

Laboratory Number: 56844- 1 56844- 2 56844- 3 56844- 4

FLASHPOINT:	>100	>100	>100	>100
Concentration:	°C	°C	°C	°C

*Cecilia G. Joagum*  
Senior Analyst

+

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*Superior Precision Analytical, Inc.*

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1524

Received

SEMCO  
Attn: CHUCK KIPERProject 93-3067-FALASCH  
Reported 30-July-1993

## ANALYSIS FOR SOLUBLE CAM 17 METALS

California Administration Code Title 22, Paragraph 66700 & EPA Methods  
SW-846 6010 & 7000 series.

## Chronology

Laboratory Number 56844

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP1 A,B,C,D	07/23/93	07/23/93	07/29/93	07/30/93		1
COMP2 A,B,C,D	07/23/93	07/23/93	07/29/93	07/30/93		2
COMP3 A,B,C,D	07/23/93	07/23/93	07/29/93	07/30/93		3
COMP4 A,B,C,D	07/23/93	07/23/93	07/29/93	07/30/93		4

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825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067-FALASCH  
Reported 30-July-1993

## ANALYSIS FOR SOLUBLE CAM 17 METALS

Laboratory Number	Sample Identification	Matrix
56844- 1	COMP1 A,B,C,D	Soil
56844- 2	COMP2 A,B,C,D	Soil
56844- 3	COMP3 A,B,C,D	Soil
56844- 4	COMP4 A,B,C,D	Soil

### RESULTS OF ANALYSIS

Laboratory Number: 56844- 1 56844- 2 56844- 3 56844- 4

	(Sb):	ND<1	ND<1	ND<1	ND<1
Antimony	(Sb):	ND<1	ND<1	ND<1	ND<1
Arsenic	(As):	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Barium	(Ba):	7.7	9.8	6.7	7.0
Beryllium	(Be):	ND<0.1	ND<0.1	ND<0.1	ND<0.1
Cadmium	(Cd):	ND<0.1	ND<0.1	ND<0.1	ND<0.1
Chromium	(Cr):	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Cobalt	(Co):	0.6	0.9	0.6	1.4
Copper	(Cu):	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Lead	(Pb):	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Mercury	(Hg):	ND<0.05	ND<0.05	ND<0.05	ND<0.05
Molybdenum	(Mo):	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Nickel	(Ni):	1.4	2.4	1.1	1.0
Selenium	(Se):	ND<1	ND<1	ND<1	ND<1
Silver	(Ag):	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Thallium	(Tl):	ND<2	ND<2	ND<2	ND<2
Vanadium	(V):	0.6	0.8	0.8	0.5
Zinc	(Zn):	ND<0.5	ND<0.5	ND<0.5	2.9
Concentration:		mg/L	mg/L	mg/L	mg/L



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 825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1527 Received

## ANALYSIS FOR SOLUBLE CAM 17 METALS Quality Assurance and Control Data - Soil

Laboratory Number 56844

Compound		Method Blank (mg/L)	PQL (mg/L)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Antimony	(Sb) :	ND<1	1	101	75-125	1
Arsenic	(As) :	ND<0.5	0.5	100	75-125	1
Barium	(Ba) :	ND<0.5	0.5	97	75-125	1
Beryllium	(Be) :	ND<0.1	0.1	98	75-125	0
Cadmium	(Cd) :	ND<0.1	0.1	104	75-125	0
Chromium	(Cr) :	ND<0.5	0.5	97	75-125	0
Cobalt	(Co) :	ND<0.5	0.5	101	75-125	1
Copper	(Cu) :	ND<0.5	0.5	103	75-125	2
Lead	(Pb) :	ND<0.5	0.5	102	75-125	0
Mercury	(Hg) :	ND<0.05	0.05	102	75-125	9
Molybdenum	(Mo) :	ND<0.5	0.5	103	75-125	1
Nickel	(Ni) :	ND<0.5	0.5	99	75-125	1
Selenium	(Se) :	ND<1	1	102	75-125	4
Silver	(Ag) :	ND<0.5	0.5	82	75-125	1
Thallium	(Tl) :	ND<2	2	94	75-125	2
Vanadium	(V) :	ND<0.5	0.5	100	75-125	1
Zinc	(Zn) :	ND<0.5	0.5	100	75-125	1


## Definitions:

ND = Not Detected

PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

QC File No. 89362

  
 Senior Analyst

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. \_\_\_\_\_

**Section I**

Consultant Name SEMCO  
 Office Location 1741 Leslie Rd. San Mateo, CA 94402  
 Fax No. (415) 572-9734  
 Project Manager Chuck Kiper  
 Phone (415) 572 8039

TURN AROUND TIME  
 (Circle One)  
 Same Day \_\_\_\_\_  
 24 Hrs \_\_\_\_\_  
 48 Hrs \_\_\_\_\_  
 72 Hrs \_\_\_\_\_  
 5 Day 5 Day

**SUPERIOR ANALYTICAL, INC.**  
 Martinez San Francisco  
 415/229-1512 415/647-2081

Send Coolers to : Modesto  San Mateo   
 Project No. / P.O. No. 93-3067-Falaseh

Sampler SEMCO-Tinas  
 Regulatory Agency Alameda County

Section IIAnalysis RequestSection IIISample Information

Sample Identification	S=Soil W=Water Matrix	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	O&G	8010	8240	Metals	Others * Subject to Subcontracting	RCI	9270	STLC CAM 17	NICKEL (P.I.)	Date	Time	Containers		Sampling Remarks
																	Quantity	Pres.	
1 Comp 1 A,B,C,D	S					X		X			X	X	X		7/23/93	10-	A	1	Composite to 1
2 Comp 2 A,B,C,D	↓					X		X			X	X	X		↓	↓	↓	↓	Comp. to 1
3 Comp 3 A,B,C,D	↓					X		X			X	X	X		↓	↓	↓	↓	Comp to 1
4 Comp 4 A,B,C,D	↓					X		X			X	X	X		↓	↓	↓	↓	Comp to 1
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Relinquished by <u>[Signature]</u> Organization <u>SEMCO</u>	Date/Time <u>7/23/93</u> <u>2:52</u>	Received by <u>[Signature]</u> Organization <u>A/D</u>	Date/Time <u>7/23/93</u> <u>2:52</u>
Relinquished by _____ Organization _____	Date/Time _____	Received by _____ Organization _____	Date/Time _____
Relinquished by _____ Organization _____	Date/Time _____	Received by _____ Organization _____	Date/Time _____

Please Initial \_\_\_\_\_

Samples Stored in Ice \_\_\_\_\_

Appropriate Containers \_\_\_\_\_

Samples Preserved \_\_\_\_\_

VOA's without Headpace \_\_\_\_\_

Comments \_\_\_\_\_



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SEMCO

SEP 21 1993

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067-FALASCHI  
Reported 16-September-1993

## ANALYSIS FOR TOTAL METALS

by EPA Method SW-846 6010 & 7000 Series

### Chronology

Laboratory Number 89981

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP1 A, B, C, D	07/23/93	09/10/93	09/15/93	09/16/93		1
COMP2 A, B, C, D	07/23/93	09/10/93	09/15/93	09/16/93		2
COMP3 A, B, C, D	07/23/93	09/10/93	09/15/93	09/16/93		3
COMP4 A, B, C, D	07/23/93	09/10/93	09/15/93	09/16/93		4



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1536

SEMCO

SEP 21 1993

SEMCO  
Attn: CHUCK KIPER

Project 93-3067 MALASCHI  
Reported 16-September-1993

## ANALYSIS FOR TOTAL METALS

Laboratory Number	Sample Identification	Matrix
89981- 1	COMP1 A,B,C,D	Soil
89981- 2	COMP2 A,B,C,D	Soil
89981- 3	COMP3 A,B,C,D	Soil
89981- 4	COMP4 A,B,C,D	Soil

## RESULTS OF ANALYSIS

Laboratory Number:    89981- 1    89981- 2    89981- 3    89981- 4

Arsenic	(As) :	5	4	4	5
Barium	(Ba) :	148	170	174	163
Cadmium	(Cd) :	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Chromium	(Cr) :	51	60	62	57
Cobalt	(Co) :	13	16	19	19
Copper	(Cu) :	35	25	58	31
Lead	(Pb) :	17	8	54	7
Mercury	(Hg) :	0.22	0.26	0.21	0.23
Nickel	(Ni) :	74	90	96	79
Zinc	(Zn) :	69	50	75	60

Concentration:                    mg/Kg                    mg/Kg                    mg/Kg                    mg/Kg



ANALYSIS FOR TOTAL METALS  
Quality Assurance and Control Data - Soil

Laboratory Number 89981

Compound	Method Blank (mg/Kg)	PQL (mg/Kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Arsenic	(As) : ND<1		98%	75-125	3%
Barium	(Ba) : ND<5		103%	75-125	2%
Cadmium	(Cd) : ND<0.5		104%	75-125	0%
Chromium	(Cr) : ND<5		98%	75-125	1%
Cobalt	(Co) : ND<5		104%	75-125	0%
Copper	(Cu) : ND<5		105%	75-125	2%
Lead	(Pb) : ND<5		102%	75-125	1%
Mercury	(Hg) : ND<0.05		96%	75-125	19%
Nickel	(Ni) : ND<5		103%	75-125	3%
Zinc	(Zn) : ND<5		105%	75-125	2%

Definitions:

ND = Not Detected

PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

QC File No. 89981

*[Signature]* 9/17/93

Senior Chemist  
Account Manager

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. \_\_\_\_\_

**Section I**

Consultant Name SEMCO  
 Office Location 1741 Leslie Rd. San Mateo, CA 94402  
 Fax No. (415) 572-9734  
 Project Manager Chuck Kiper  
 Phone (415) 572 8033

**TURN AROUND TIME**  
 (Circle One)  
 Same Day \_\_\_\_\_  
 24 Hrs \_\_\_\_\_  
 48 Hrs \_\_\_\_\_  
 72 Hrs \_\_\_\_\_  
5 Day

**SUPERIOR ANALYTICAL, INC.**  
 Martinez San Francisco  
 415/229-1512 415/647-2081

Send Coolers to : Modesto  San Mateo   
 Project No. / P.O. No. 93-3067-Falasco

Sampler SEMCO-Tinas  
 Regulatory Agency Alameda County

<b>Section II</b>	<b>Analysis Request</b>	<b>Section III</b>	<b>Sample Information</b>
-------------------	-------------------------	--------------------	---------------------------

Sample Identification	S=Soil W=Water Matrix	A=Air	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	O&G	8010	8240	Metals	Others * Subject to Subcontracting	RCI	8270	STLC CAM 17	Date	Time	Containers		Sampling Remarks	
																	Quantity	Pres.		
1 Comp 1 A,B,C,D	S						X	X				X	X	X	7/23/93		4	1	Composite to 1	
2 Comp 2 A,B,C,D	↓						X	X				X	X	X	↓	↓	↓	↓	Comp. to 1	
3 Comp 3 A, B,C,D	↓						X	X				X	X	X	↓	↓	↓	↓	Comp to 1	
4 Comp 4 A, B,C,D	↓						X	X				X	X	X	↓	↓	↓	↓	Comp to 1	
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Relinquished by <u>Chuck Kiper</u>	Date/Time <u>7/23/93</u>	Received by <u>AKD</u>	Please Initial _____ Samples Stored in Ice _____ Appropriate Containers _____ Samples Preserved _____ VOA's without Headpace _____ Comments _____
Organization <u>SEMCO</u>	Date/Time <u>2:52</u>	Organization <u>AKD</u>	
Relinquished by _____	Date/Time _____	Received by _____	
Organization _____	Date/Time _____	Organization _____	
Relinquished by _____	Date/Time _____	Received by _____	
Organization _____	Date/Time _____	Organization _____	



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

SEMCO

AUG 25 1993

Received

## C E R T I F I C A T E   O F   A N A L Y S I S

LABORATORY NO.: 56844  
CLIENT: SEMCO  
CLIENT PROJECT NO.: 93-3067

DATE RECEIVED: 07/23/93  
DATE REPORTED: 08/18/93

Following is a list of Cross referenced Lab Numbers and Sample I.D.'s for referring to the following reports.

Superior Lab Number	Subbed Lab Number	Customer Sample Identification
56844-1	9307228-01B	COMP 1 A,B,C,D
56844-3	9307228-03B	COMP 3 A,B,C,D

Subbed to: CLAYTON ENVIRONMENTAL

SEMCO

Clayton  
ENVIRONMENTAL  
CONSULTANTS

AUG 25 1993

Received

Results of Analysis  
for  
Superior Analytical Laboratory

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification: 56844-1  
Lab Number: 9307228-01  
Sample Matrix/Media: SOIL

Date Sampled: 07/23/93  
Date Received: 07/27/93

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Reactive Cyanide	<1	1	mg/kg	--	07/28/93	--	EPA 9010
Reactive Sulfide	<10	10	mg/kg	--	07/28/93	--	SW 7.3.4.2

ND Not detected at or above limit of detection  
< Not detected at or above limit of detection  
- Information not available or not applicable

Results are reported on a wet weight basis, as received



SEMCO  
AUG 25 1993  
Received

Results of Analysis  
for  
Superior Analytical Laboratory

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification: 56844-2  
Lab Number: 9307228-02  
Sample Matrix/Media: SOIL

Date Sampled: 07/23/93  
Date Received: 07/27/93

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Reactive Cyanide	<1	1	mg/kg	---	07/28/93	---	EPA 9010
Reactive Sulfide	<10	10	mg/kg	---	07/28/93	---	SW 7.3.4.2

ND Not detected at or above limit of detection  
< Not detected at or above limit of detection  
- Information not available or not applicable

Results are reported on a wet weight basis, as received

SEMCO  
AUG 25 1993

Results of Analysis  
for  
Superior Analytical Laboratory

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification: 56844-3  
Lab Number: 9307228-03  
Sample Matrix/Media: SOIL

Date Sampled: 07/23/93  
Date Received: 07/27/93

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Reactive Cyanide	<1	1	mg/kg	—	07/28/93	—	EPA 9010
Reactive Sulfide	<10	10	mg/kg	—	07/28/93	—	SW 7.3.4.2

ND Not detected at or above limit of detection  
< Not detected at or above limit of detection  
— Information not available or not applicable

Results are reported on a wet weight basis, as received

SEMCO

AUG 25 1993

Received

Results of Analysis  
for  
Superior Analytical Laboratory

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification: 56844-4  
Lab Number: 9307228-04  
Sample Matrix/Media: SOIL

Date Sampled: 07/23/93  
Date Received: 07/27/93

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Reactive Cyanide	<1	1	mg/kg	—	07/28/93	—	EPA 9010
Reactive Sulfide	<10	10	mg/kg	—	07/28/93	—	SW 7.3.4.2

ND Not detected at or above limit of detection  
< Not detected at or above limit of detection  
— Information not available or not applicable

Results are reported on a wet weight basis, as received

SEMCO

AUG 25 1993

Received

Results of Analysis  
for  
Superior Analytical Laboratory

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification: METHOD BLANK  
Lab Number: 9307228-05  
Sample Matrix/Media: SOIL

Date Sampled: ---  
Date Received: ---

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Reactive Cyanide	<1	1	mg/kg	---	07/28/93	---	EPA 9010
Reactive Sulfide	<10	10	mg/kg	---	07/28/93	---	SW 7.3.4.2

ND Not detected at or above limit of detection  
< Not detected at or above limit of detection  
--- Information not available or not applicable

Results are reported on a wet weight basis, as received

Quality Assurance Results Summary  
for  
Clayton Project No. 93072.28

Clayton Lab Number: 9307226-01A  
Ext./Prep. Method: EPA7.3.4.2  
Date: 07/28/93  
Analyst: HYW  
Std Source: KODAK #AOA  
Sample Matrix/Media: SOIL

Analytical Method: EPA7.3.4.2  
Instrument ID: 00008  
Date: 07/28/93  
Time: 16:00  
Analyst: HYW  
Units: MG/KG

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
REACTIVE SULFIDE	ND	272	255	94	250	92	93	66	106	2.0	25

SEMCO  
AUG 25 1993  
Received

LCS = Laboratory Control Sample  
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary  
for  
Clayton Project No. 93072.28

Clayton Lab Number: 9307226-01A  
Ext./Prep. Method: EPA9010  
Date: 07/28/93  
Analyst: HYW  
Std. Source: MALL #6881  
Sample Matrix/Media: SOIL

Analytical Method: EPA9010  
Instrument ID: 07487  
Date: 07/28/93  
Time: 14:00  
Analyst: HYW  
Units: MG/KG

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
CYANIDE	ND	10.0	11.0	110	10.8	108	109	58	135	2.2	25

SEMCO  
AUG 25 1993  
Received

LCS = Laboratory Control Sample  
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
SOR = Spike out of range due to high sample concentration.

# CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. \_\_\_\_\_

**Section I**

Consultant Name SEMCO  
 Office Location 1741 Leefe Rd. San Mateo, CA 94402  
 Fax No. (415) 572-9734  
 Project Manager Chuck Kiper  
 Phone (415) 572 8033

TURN AROUND TIME  
 (Circle One)  
 Same Day \_\_\_\_\_  
 24 Hrs \_\_\_\_\_  
 48 Hrs \_\_\_\_\_  
 72 Hrs \_\_\_\_\_  
 5 Day           

**SUPERIOR ANALYTICAL, INC**  
 Martinez San Francisco  
 415/229-1512 415/647-2081

Send Coolers to : Modesto  San Mateo   
 Project No. / P.O. No. 93-3067- Falaschi

Sampler SEMCO-Tinas  
 Regulatory Agency Alameda County

Section II		Analysis Request										Section III		Sample Information						
Sample Identification	Matrix S=Soil A=Air W=Water	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	OAG	8010	8240	Metals	Others * Subject to Subcontracting	RCI	8270	SILICAM 17	Date	Time	Containers		Bioremediation <input type="checkbox"/>	Contamination <input type="checkbox"/>	Sampling Remarks
																Quantity	Pres.			
1 Comp 1 A,B,C,D	S					X	X				X	X	X	7/23/93	10	4	1			Comp to 1
2 Comp 2 A,B,C,D	↓					X	X				X	X	X	↓	↓	↓	↓			Comp to 1
3 Comp 3 A,B,C,D	↓					X	X				X	X	X	↓	↓	↓	↓			Comp to 1
4 Comp 4 A,B,C,D	↓					X	X				X	X	X	↓	↓	↓	↓			Comp to 1
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Received  
 AUG 18 1993  
 SEMCO

Relinquished by [Signature]  
 Organization SEMCO

Relinquished by [Signature]  
 Organization AERO

Relinquished by \_\_\_\_\_  
 Organization \_\_\_\_\_

Date/Time 7/23/93  
2:52

Date/Time 7-27  
4/10

Date/Time \_\_\_\_\_

Received by [Signature]  
 Organization AERO

Received by \_\_\_\_\_  
 Organization \_\_\_\_\_

Received by [Signature]  
 Organization \_\_\_\_\_

Please Initial \_\_\_\_\_  
 Samples Stored in Ios \_\_\_\_\_  
 Appropriate Containers \_\_\_\_\_  
 Samples Preserved \_\_\_\_\_  
 VOA's without Headspace \_\_\_\_\_  
 Comments \_\_\_\_\_



# Superior Precision Analytical, Inc.

AUG 18 1993

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1513

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067-FALASEH  
Reported 16-August-1993

ANALYSIS FOR TOTAL MERCURY  
by EPA Method SW-846 7471

Chronology

Laboratory Number 89588

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP 1 A-D	07/23/93	08/12/93	08/12/93	08/13/93		1
COMP 2 A-D	07/23/93	08/12/93	08/12/93	08/13/93		2
COMP 3 A-D	07/23/93	08/12/93	08/12/93	08/13/93		3
COMP 4 A-D	07/23/93	08/12/93	08/12/93	08/13/93		4





AUG 18 1993

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067-FALASEH  
Reported 16-August-1993

ANALYSIS FOR TOTAL MERCURY

Laboratory Number	Sample Identification	Matrix
89588- 1	COMP 1 A-D	Soil
89588- 2	COMP 2 A-D	Soil
89588- 3	COMP 3 A-D	Soil
89588- 4	COMP 4 A-D	Soil

RESULTS OF ANALYSIS

Laboratory Number:	89588- 1	89588- 2	89588- 3	89588- 4
Mercury:	0.20	0.23	0.15	0.20
Concentration:	mg/Kg	mg/Kg	mg/Kg	mg/Kg

\*Digestion method modified--amount of soil used increased five-fold to allow for reduction of reporting limit to five times IDL.

AUG 18 1993



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

Received

## ANALYSIS FOR TOTAL MERCURY Quality Assurance and Control Data - Soil

Laboratory Number 89588

Compound	Method Blank (mg/Kg)	PQL (mg/Kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Mercury:	ND<0.005	0.005	85%	75-125	5%

### Definitions:

ND = Not Detected  
PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

File No. 89588

Afsaneh Salimpour  
Senior Analyst



AUG 18 1993

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067-FALASEH  
Reported 16-August-1993

---

ANALYSIS FOR TOTAL THALLIUM

by EPA Method SW-846 7841

Chronology

Laboratory Number 89588

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP 1 A-D	07/23/93	08/12/93	08/12/93	08/13/93		1
COMP 2 A-D	07/23/93	08/12/93	08/12/93	08/13/93		2
COMP 3 A-D	07/23/93	08/12/93	08/12/93	08/13/93		3
COMP 4 A-D	07/23/93	08/12/93	08/12/93	08/13/93		4



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

AUG 18 1993

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067-FALASEH  
Reported 16-August-1993

## ANALYSIS FOR TOTAL THALLIUM

Laboratory Number	Sample Identification	Matrix
89588- 1	COMP 1 A-D	Soil
89588- 2	COMP 2 A-D	Soil
89588- 3	COMP 3 A-D	Soil
89588- 4	COMP 4 A-D	Soil

## RESULTS OF ANALYSIS

Laboratory Number:	89588- 1	89588- 2	89588- 3	89588- 4
--------------------	----------	----------	----------	----------

Thallium (Tl):	ND<0.1	ND<0.1	ND<0.1	ND<0.1
Concentration:	mg/Kg	mg/Kg	mg/Kg	mg/Kg

\*Digestion method modified--amount of soil used increased five-fold to allow for reduction of reporting limit to 10 times IDL.

AUG 18 1993



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

Received

## ANALYSIS FOR TOTAL THALLIUM Quality Assurance and Control Data - Soil

Laboratory Number 89588

Compound		Method Blank (mg/Kg)	PQL (mg/Kg)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Thallium	(Tl):	ND<0.1	0.1	97%	75-125	1%

### Definitions:

ND = Not Detected  
PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

File No. 89588

*Afsaneh Salimpour*  
 Senior Analyst



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SEMCO  
Attn: CHUCK KIPER

Project 93-3067-FALASEH/  
Reported 16-August-1993

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## ANALYSIS FOR SOLUBLE ANTIMONY, BERYLLIUM, & SELENIUM

by California Administrative Code Title 22 & SW-846 Method 6010

### Chronology

Laboratory Number 89588

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP 1 A-D	07/23/93	08/12/93	07/27/93	08/13/93		1
COMP 2 A-D	07/23/93	08/12/93	07/27/93	08/13/93		2
COMP 3 A-D	07/23/93	08/12/93	07/27/93	08/13/93		3
COMP 4 A-D	07/23/93	08/12/93	07/27/93	08/13/93		4

AUG 18 1993



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1520

Received

SEMCO  
Attn: CHUCK KIPER

Project 93-3067-FALASEH  
Reported 16-August-1993

## ANALYSIS FOR SOLUBLE ANTIMONY, BERYLLIUM, & SELENIUM

Laboratory Number	Sample Identification	Matrix
89588- 1	COMP 1 A-D	Soil
89588- 2	COMP 2 A-D	Soil
89588- 3	COMP 3 A-D	Soil
89588- 4	COMP 4 A-D	Soil

### RESULTS OF ANALYSIS\*

Laboratory Number:	89588- 1	89588- 2	89588- 3	89588- 4
Antimony (Sb):	ND<0.2	ND<0.2	ND<0.2	ND<0.2
Beryllium (Be):	ND<0.02	ND<0.02	ND<0.02	ND<0.02
Selenium (Se):	ND<0.2	ND<0.2	ND<0.2	ND<0.2
Concentration:	mg/L	mg/L	mg/L	mg/L

\*STLC extracts run undiluted to allow for five-fold reduction in reporting limits.



AUG 18 1993

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

Received

ANALYSIS FOR SOLUBLE ANTIMONY, BERYLLIUM, & SELENIUM  
Quality Assurance and Control Data - Extract

Laboratory Number 89588

Compound		Method Blank (mg/L)	PQL (mg/L)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Antimony	(Sb):	ND<0.2	0.2	89%	75-125	2%
Beryllium	(Be):	ND<0.02	0.02	90%	75-125	1%
Selenium	(Se):	ND<0.2	0.2	98%	75-125	1%

## Definitions:

ND = Not Detected

PQL = Practical Quantitation Limit

QC File No. 89588

RPD = Relative Percent Difference

*Afsaneh Salami*  
Senior Analyst



# Chain of Custody and Analysis Request

Section I

page \_\_\_ of \_\_\_

From: Superior Precision Analytical, Inc.  
1555 Burke St. Unit I  
San Francisco, CA 92124  
 Phone No. (415) 647-2081 Fax No. (415) 821-7123  
 Contact: CECILIA JOAQUIN  
 P.O. No. 56844

Turn Around Time  
 (circle one)  
 Same Day 72 Hrs  
 24 Hrs 5 Day  
 48 Hrs 10 Day



**Superior Precision Analytical, Inc.**  
 P.O. Box 1545  
 Martinez, California 94553

4 DAY

Work Subcontracted to: CLAYTON ENVIRONMENTAL

## Section II: Analysis Request

Laboratory Sample Identification	Matrix: S = Soil A = Air W = Water	CAM17	Metals:	418.1	8270	8080 (pest. and PCB's)	Client Sample Identification	Number of Containers	Preservative (yes or no)	Date Sampled	Sampling Remarks
											<input type="checkbox"/> Chevron <input checked="" type="checkbox"/> Non-Chevron <b>**Please Fax Results**</b> to Superior SF
1 <u>56844-1</u>	<u>SOIL</u>				<u>X</u>		<u>COMP 1-ABCD</u>	<u>1</u>	<u>N</u>	<u>7/23</u>	Client knows they are out of hold time Need results ASAP on Wednesday 8/18/93 Looking for Det Limit of 330 ug/kg Samples already @ your laboratory
2 <u>56844-3</u>	<u>SOIL</u>				<u>X</u>		<u>COMP 3 ABCD</u>	<u>1</u>	<u>N</u>	<u>7/23</u>	
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

Relinquished by Cecilia Joaquin  
 Organization Superior Lab

Relinquished by \_\_\_\_\_  
 Organization \_\_\_\_\_

Relinquished by \_\_\_\_\_  
 Organization \_\_\_\_\_

Date/Time 8/12/93 3:30 PM Received by \_\_\_\_\_  
 Organization \_\_\_\_\_

Date/Time \_\_\_\_\_ Received by \_\_\_\_\_  
 Organization \_\_\_\_\_

Date/Time \_\_\_\_\_ Received by \_\_\_\_\_  
 Organization \_\_\_\_\_

Date/Time \_\_\_\_\_ Lab please initial the following:

Date/Time \_\_\_\_\_ Samples Stored in Ice \_\_\_\_\_

Date/Time \_\_\_\_\_ Appropriate Containers \_\_\_\_\_

Date/Time \_\_\_\_\_ Samples Preserved \_\_\_\_\_

Date/Time \_\_\_\_\_ VOA's without Headspace \_\_\_\_\_

Date/Time \_\_\_\_\_ Comments \_\_\_\_\_

Receiver

AUG 25 1993

SEMCO

CIA  
SSA

Results of Analysis  
for  
Superior Analytical Laboratory

SEMCO

AUG 25 1993

Received

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification: 56844-1	Date Sampled: 07/23/93
Lab Number: 9307228-01B	Date Received: 07/27/93
Sample Matrix/Media: SOIL	Date Extracted: 08/13/93
Extraction Method: EPA 3550	Date Analyzed: 08/16/93
Analytical Method: EPA 8270	

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
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Acid Extractables

4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	10
2-Methyl-4,6-dinitrophenol	534-52-1	ND	10
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	10
Pentachlorophenol	87-86-5	ND	10
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

Base/Neutral Extractables

Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzidine	92-87-5	ND	50
Benzoic acid	65-85-0	ND	8
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	ND	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(ghi)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	4
Benzyl butyl phthalate	85-68-7	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	20
4-Bromophenyl phenyl ether	101-55-3	ND	2
4-Chloroaniline	106-47-8	ND	10

Results of Analysis  
for  
Superior Analytical Laboratory

SEMCO

AUG 25 1993

Client Reference: 56844  
Clayton Project No. 93072.28

Received

Sample Identification: 56844-1	Date Sampled: 07/23/93
Lab Number: 9307228-01B	Date Received: 07/27/93
Sample Matrix/Media: SOIL	Date Extracted: 08/13/93
Extraction Method: EPA 3550	Date Analyzed: 08/16/93
Analytical Method: EPA 8270	

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
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Base/Neutral Extractables (continued)

2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	ND	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	50
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	ND	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2
Hexachlorocyclopentadiene	77-47-4	ND	20
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methyl naphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	10
3-Nitroaniline	99-09-2	ND	10
4-Nitroaniline	100-01-6	ND	10
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitrosodi-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	ND	2

SEMCO

AUG 25 1993

Received

Results of Analysis  
for  
Superior Analytical Laboratory

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification: 56844-1	Date Sampled: 07/23/93
Lab Number: 9307228-01B	Date Received: 07/27/93
Sample Matrix/Media: SOIL	Date Extracted: 08/13/93
Extraction Method: EPA 3550	Date Analyzed: 08/16/93
Analytical Method: EPA 8270	

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
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Base/Neutral Extractables (continued)

1,2,4-Trichlorobenzene	120-82-1	ND	2
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Surrogates

		Recovery (%)	QC Limits (%)
2-Fluorobiphenyl	321-60-8	108	30 - 115
2-Fluorophenol	367-12-4	92	25 - 121
Nitrobenzene-d5	4165-60-0	85	23 - 120
Phenol-d5	13127-88-3	86	24 - 113
Terphenyl-d14	98904-43-9	106	18 - 137
2,4,6-Tribromophenol	118-79-6	65	19 - 122

ND: Not detected at or above limit of detection  
--: Information not available or not applicable  
Results are reported on a wet weight basis, as received

Note: Detection limits increased due to matrix interference.

Results of Analysis  
for  
Superior Analytical Laboratory

SEMCO

AUG 25 1993

Received

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification:	56844-3	Date Sampled:	07/23/93
Lab Number:	9307228-03B	Date Received:	07/27/93
Sample Matrix/Media:	SOIL	Date Extracted:	08/13/93
Extraction Method:	EPA 3550	Date Analyzed:	08/16/93
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
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Acid Extractables

4-Chloro-3-methylphenol	59-50-7	ND	2
2-Chlorophenol	95-57-8	ND	2
2,4-Dichlorophenol	120-83-2	ND	2
2,4-Dimethylphenol	105-67-9	ND	2
2,4-Dinitrophenol	51-28-5	ND	10
2-Methyl-4,6-dinitrophenol	534-52-1	ND	10
2-Methylphenol	95-48-7	ND	2
4-Methylphenol	106-44-5	ND	2
2-Nitrophenol	88-75-5	ND	2
4-Nitrophenol	100-02-7	ND	10
Pentachlorophenol	87-86-5	ND	10
Phenol	108-95-2	ND	2
2,4,5-Trichlorophenol	95-95-4	ND	2
2,4,6-Trichlorophenol	88-06-2	ND	2

Base/Neutral Extractables

Acenaphthene	83-32-9	ND	2
Acenaphthylene	208-96-8	ND	2
Anthracene	120-12-7	ND	2
Benzidine	92-87-5	ND	50
Benzoic acid	65-85-0	ND	8
Benzo(a)anthracene	56-55-3	ND	2
Benzo(b)fluoranthene	205-99-2	2	2
Benzo(k)fluoranthene	207-08-9	ND	2
Benzo(ghi)perylene	191-24-2	ND	2
Benzo(a)pyrene	50-32-8	ND	2
Benzyl alcohol	100-51-6	ND	4
Benzyl butyl phthalate	85-68-7	ND	2
Bis(2-chloroethoxy)methane	111-91-1	ND	2
Bis(2-chloroethyl)ether	111-44-4	ND	2
Bis(2-chloroisopropyl)ether	108-60-1	ND	2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	20
4-Bromophenyl phenyl ether	101-55-3	ND	2
4-Chloroaniline	106-47-8	ND	10

Results of Analysis  
for  
Superior Analytical Laboratory

SEMCO

AUG 25 1993

Client Reference: 56844  
Clayton Project No. 93072.28

Received

Sample Identification: 56844-3	Date Sampled: 07/23/93
Lab Number: 9307228-03B	Date Received: 07/27/93
Sample Matrix/Media: SOIL	Date Extracted: 08/13/93
Extraction Method: EPA 3550	Date Analyzed: 08/16/93
Analytical Method: EPA 8270	

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
---------	-------	--------------------------	----------------------------------

Base/Neutral Extractables (continued)

2-Chloronaphthalene	91-58-7	ND	2
4-Chlorophenyl phenyl ether	7005-72-3	ND	2
Chrysene	218-01-9	3	2
Dibenzo(a,h)anthracene	53-70-3	ND	2
Dibenzofuran	132-64-9	ND	2
Di-n-butylphthalate	84-74-2	ND	2
1,2-Dichlorobenzene	95-50-1	ND	2
1,3-Dichlorobenzene	541-73-1	ND	2
1,4-Dichlorobenzene	106-46-7	ND	2
3,3'-Dichlorobenzidine	91-94-1	ND	50
Diethylphthalate	84-66-2	ND	2
Dimethylphthalate	131-11-3	ND	2
2,4-Dinitrotoluene	121-14-2	ND	2
2,6-Dinitrotoluene	606-20-2	ND	2
Di-n-octylphthalate	117-84-0	ND	2
Fluoranthene	206-44-0	3	2
Fluorene	86-73-7	ND	2
Hexachlorobenzene	118-74-1	ND	2
Hexachlorobutadiene	87-68-3	ND	2
Hexachlorocyclopentadiene	77-47-4	ND	20
Hexachloroethane	67-72-1	ND	2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	2
Isophorone	78-59-1	ND	2
2-Methyl naphthalene	91-57-6	ND	2
Naphthalene	91-20-3	ND	2
2-Nitroaniline	88-74-4	ND	10
3-Nitroaniline	99-09-2	ND	10
4-Nitroaniline	100-01-6	ND	10
Nitrobenzene	98-95-3	ND	2
N-Nitrosodiphenylamine	86-30-6	ND	2
N-Nitrosodi-n-propylamine	621-64-7	ND	2
Phenanthrene	85-01-8	ND	2
Pyrene	129-00-0	4	2

Results of Analysis  
for  
Superior Analytical Laboratory

AUG 25 1993

Received

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification:	56844-3	Date Sampled:	07/23/93
Lab Number:	9307228-03B	Date Received:	07/27/93
Sample Matrix/Media:	SOIL	Date Extracted:	08/13/93
Extraction Method:	EPA 3550	Date Analyzed:	08/16/93
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
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Base/Neutral Extractables (continued)

1,2,4-Trichlorobenzene	120-82-1	ND	2
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<u>Surrogates</u>		<u>Recovery (%)</u>	<u>QC Limits (%)</u>
2-Fluorobiphenyl	321-60-8	105	30 - 115
2-Fluorophenol	367-12-4	93	25 - 121
Nitrobenzene-d5	4165-60-0	86	23 - 120
Phenol-d5	13127-88-3	85	24 - 113
Terphenyl-d14	98904-43-9	99	18 - 137
2,4,6-Tribromophenol	118-79-6	92	19 - 122

ND: Not detected at or above limit of detection  
--: Information not available or not applicable  
Results are reported on a wet weight basis, as received

Note: Detection limits increased due to matrix interference.

Results of Analysis  
for  
Superior Analytical Laboratory

SEMCO

AUG 25 1993

Received

Client Reference: 56844  
Clayton Project No. 93072.28

Sample Identification: METHOD BLANK	Date Sampled: --
Lab Number: 9307228-05A	Date Received: --
Sample Matrix/Media: SOIL	Date Extracted: 08/13/93
Extraction Method: EPA 3550	Date Analyzed: 08/16/93
Analytical Method: EPA 8270	

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
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Acid Extractables

4-Chloro-3-methylphenol	59-50-7	ND	0.2
2-Chlorophenol	95-57-8	ND	0.2
2,4-Dichlorophenol	120-83-2	ND	0.2
2,4-Dimethylphenol	105-67-9	ND	0.2
2,4-Dinitrophenol	51-28-5	ND	1
2-Methyl-4,6-dinitrophenol	534-52-1	ND	1
2-Methylphenol	95-48-7	ND	0.2
4-Methylphenol	106-44-5	ND	0.2
2-Nitrophenol	88-75-5	ND	0.2
4-Nitrophenol	100-02-7	ND	1
Pentachlorophenol	87-86-5	ND	1
Phenol	108-95-2	ND	0.2
2,4,5-Trichlorophenol	95-95-4	ND	0.2
2,4,6-Trichlorophenol	88-06-2	ND	0.2

Base/Neutral Extractables

Acenaphthene	83-32-9	ND	0.2
Acenaphthylene	208-96-8	ND	0.2
Anthracene	120-12-7	ND	0.2
Benzidine	92-87-5	ND	5
Benzoic acid	65-85-0	ND	0.8
Benzo(a)anthracene	56-55-3	ND	0.2
Benzo(b)fluoranthene	205-99-2	ND	0.2
Benzo(k)fluoranthene	207-08-9	ND	0.2
Benzo(ghi)perylene	191-24-2	ND	0.2
Benzo(a)pyrene	50-32-8	ND	0.2
Benzyl alcohol	100-51-6	ND	0.4
Benzyl butyl phthalate	85-68-7	ND	0.2
Bis(2-chloroethoxy)methane	111-91-1	ND	0.2
Bis(2-chloroethyl)ether	111-44-4	ND	0.2
Bis(2-chloroisopropyl)ether	108-60-1	ND	0.2
Bis(2-ethylhexyl)phthalate	117-81-7	ND	2
4-Bromophenyl phenyl ether	101-55-3	ND	0.2
4-Chloroaniline	106-47-8	ND	1



Results of Analysis  
for  
Superior Analytical Laboratory

SEMCO

AUG 25 1993

Client Reference: 56844  
Clayton Project No. 93072.28

Received

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9307228-05A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	08/13/93
Extraction Method:	EPA 3550	Date Analyzed:	08/16/93
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
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Base/Neutral Extractables (continued)

2-Chloronaphthalene	91-58-7	ND	0.2
4-Chlorophenyl phenyl ether	7005-72-3	ND	0.2
Chrysene	218-01-9	ND	0.2
Dibenzo(a,h)anthracene	53-70-3	ND	0.2
Dibenzofuran	132-64-9	ND	0.2
Di-n-butylphthalate	84-74-2	ND	0.2
1,2-Dichlorobenzene	95-50-1	ND	0.2
1,3-Dichlorobenzene	541-73-1	ND	0.2
1,4-Dichlorobenzene	106-46-7	ND	0.2
3,3'-Dichlorobenzidine	91-94-1	ND	5
Diethylphthalate	84-66-2	ND	0.2
Dimethylphthalate	131-11-3	ND	0.2
2,4-Dinitrotoluene	121-14-2	ND	0.2
2,6-Dinitrotoluene	606-20-2	ND	0.2
Di-n-octylphthalate	117-84-0	ND	0.2
Fluoranthene	206-44-0	ND	0.2
Fluorene	86-73-7	ND	0.2
Hexachlorobenzene	118-74-1	ND	0.2
Hexachlorobutadiene	87-68-3	ND	0.2
Hexachlorocyclopentadiene	77-47-4	ND	2
Hexachloroethane	67-72-1	ND	0.2
Indeno(1,2,3-cd)pyrene	193-39-5	ND	0.2
Isophorone	78-59-1	ND	0.2
2-Methyl naphthalene	91-57-6	ND	0.2
Naphthalene	91-20-3	ND	0.2
2-Nitroaniline	88-74-4	ND	1
3-Nitroaniline	99-09-2	ND	1
4-Nitroaniline	100-01-6	ND	1
Nitrobenzene	98-95-3	ND	0.2
N-Nitrosodiphenylamine	86-30-6	ND	0.2
N-Nitrosodi-n-propylamine	621-64-7	ND	0.2
Phenanthrene	85-01-8	ND	0.2
Pyrene	129-00-0	ND	0.2

Results of Analysis  
for  
Superior Analytical Laboratory

SEMCO

AUG 25 1993

Client Reference: 56844  
Clayton Project No. 93072.28

Received

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9307228-05A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	08/13/93
Extraction Method:	EPA 3550	Date Analyzed:	08/16/93
Analytical Method:	EPA 8270		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
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Base/Neutral Extractables (continued)

1,2,4-Trichlorobenzene	120-82-1	ND	0.2
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Surrogates

		<u>Recovery (%)</u>	<u>QC Limits (%)</u>
2-Fluorobiphenyl	321-60-8	83	30 - 115
2-Fluorophenol	367-12-4	80	25 - 121
Nitrobenzene-d5	4165-60-0	84	23 - 120
Phenol-d5	13127-88-3	82	24 - 113
Terphenyl-d14	98904-43-9	87	18 - 137
2,4,6-Tribromophenol	118-79-6	68	19 - 122

ND: Not detected at or above limit of detection  
 --: Information not available or not applicable  
 Results are reported on a wet weight basis, as received

Quality Assurance Results Summary  
for  
Clayton Project No. 93072.28

Clayton Lab Number: 9308153-MB  
Ext /Prep. Method: EPA 3550  
Date: 08/13/93  
Analyst: CS  
Std. Source: E930812-01W  
Sample Matrix/Media: SOIL

Analytical Method: EPA8270  
Instrument ID: 05624  
Date: 08/16/93  
Time: 14:30  
Analyst: AC  
Units: MG/KG

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
(A) Phenol	ND	3.33	2.59	78	2.70	81	79	26	90	4.2	35
(B) 2-Chlorophenol	ND	3.33	2.90	87	3.00	90	89	25	102	3.4	50
(C) 1,4-Dichlorobenzene	ND	3.33	2.68	80	2.79	84	82	28	104	4.0	27
(D) N-Nitrosodipropylamine	ND	3.33	2.89	87	3.00	90	88	41	126	3.7	38
(E) 1,2,4-Trichlorobenzene	ND	3.33	2.61	78	2.73	82	80	38	107	4.5	23
(F) 4-Chloro-m-cresol	ND	3.33	2.60	78	2.63	79	79	26	103	1.1	33
(G) Acenaphthene	ND	3.33	2.88	86	2.85	86	86	31	137	1.0	19
(H) 4-Nitrophenol	ND	3.33	1.88	56	1.95	59	58	11	114	3.7	50
(I) 2,4-Dinitrotoluene	ND	3.33	2.51	75	2.56	77	76	28	89	2.0	47
(J) Pentachlorophenol	ND	3.33	2.55	77	2.68	80	79	17	109	5.0	47
(K) Pyrene	ND	3.33	2.96	89	3.00	90	89	35	142	1.3	36

SEMCO  
AUG 25 1993  
Receiver

LCS = Laboratory Control Sample  
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
SOR = Spike out of range due to high sample concentration.



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

SEMCO  
Attn: Rich Hamilton

Project 93-3067  
Reported 25-September-1993

## ANALYSIS FOR SOLUBLE NICKEL

by California Administrative Code Title 22 & SW-846 Method 6010

Chronology	Laboratory Number 90042					
Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
COMP1,2,3,4A-D	07/23/93	09/21/93	09/21/93	09/24/93		1

\* - Deionized water was used as a leachate per client's request.



# Superior Precision Analytical, Inc.

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SEMCO  
Attn: Rich Hamilton

Project 93-3067  
Reported 25-September-1993

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## ANALYSIS FOR SOLUBLE NICKEL

Laboratory Number	Sample Identification	Matrix
90042- 1	COMP1,2,3,4A-D	Soil

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## RESULTS OF ANALYSIS

Laboratory Number: 90042- 1

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Soluble Nickel (Ni): ND<0.5

Concentration: mg/L



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## ANALYSIS FOR SOLUBLE NICKEL Quality Assurance and Control Data - Soil

Laboratory Number 90042

Compound	Method Blank (mg/L)	PQL (mg/L)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Soluble Nickel (Ni):	ND<0.5	0.5	94%	75-125	1%

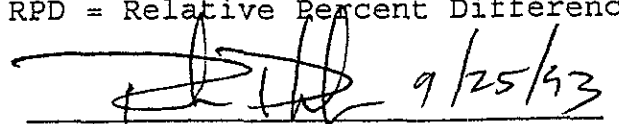
### Definitions:

ND = Not Detected

PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

QC File No. 90042

  
 Senior Chemist  
 Account Manager