



RECEIVED

2:35 pm, May 04, 2009

Alameda County
Environmental Health

February 12, 1996

Project No. 95-125

Ms. Eva Chu
Environmental Protection Division
Department of Environmental Health
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Tank Closure Report
BP Service Station (Tosco Facility No. 11128)
4707 First Street
Livermore, California

Dear Ms. Chu:

An underground storage tank (UST) was removed on November 1, 1995 from the BP Service Station (Tosco facility number 11128) located at 4707 First Street in Livermore, California. The UST was removed by American Construction and Environmental Services, Inc. (American) on behalf of Tosco Refining and Marketing Company (Tosco). Innovative Technical Solutions, Inc. (ITSI) was contracted by Tosco to perform compliance sampling during removal of the UST and to prepare the Tank Closure Report upon completion of the project.

One 1,000-gallon double-walled, fiberglass waste oil UST was removed from the site. The UST was installed in 1987 and was operational until September 1995. Removal of the UST was performed according to the Underground Tank Closure Plan accepted by Alameda County Health Care Services Agency, Department of Environmental Health, Environmental Protection Division (Alameda County). A copy of the accepted Underground Tank Closure Plan is included as Attachment A.

CLOSURE ACTIVITIES

UST REMOVAL

Fire Code Permit Number 95-6023 O was issued by the City of Livermore Fire Department, Fire Prevention Bureau on October 24, 1995 for the removal of one UST at the site. A copy of the permit is included in Attachment 2. The Bay Area Air Quality Management District was notified on September 19, 1995 of the intent to stockpile soil at the site during excavation activities. A copy of the notification form is included in Attachment B.

Prior to tank removal activities, the station owner contracted with Evergreen Environmental Services to remove the remaining liquid from the UST. On November 1, 1995, one 1,000-gallon double-walled, fiberglass waste oil UST, two hydraulic lifts, and one wastewater separator were

removed from the site. ITSI personnel documented the removal activities and collected soil samples from the excavations. Ms. Eva Chu from Alameda County and Ms. Danielle D. Stefani from the Livermore Fire Department were on site to witness and document the UST removal.

DESCRIPTION OF THE UST

Before removal of the UST, the lower explosion limits (LEL) and oxygen (O₂) levels inside the UST were measured at 0% and 0.5%, respectively. The LEL and O₂ measurements are documented by the Livermore Fire Department. A copy of the Fire Inspection Report is included in Attachment B. The UST was removed from the excavation by American. The double-walled fiberglass UST was in very good condition and the labels on the tank were still legible. The label read 1,000 gallon Xerxes Brand Tank. The piping appeared clean and in good condition.

The UST was transported offsite on November 1, 1995 under Uniform Hazardous Waste Manifest Number 95592586 by Erickson Inc. (Erickson). The UST was transported to Erickson's facility in Richmond, California for destruction. A copy of the Certificate of Destruction is included in Attachment B.

DESCRIPTION OF THE EXCAVATION

The total depth of the excavation was approximately 7 feet below ground surface (bgs). The excavation was rectangular and measured approximately 15 long by 8 feet wide. The excavation contained no standing water, and no stained soils were observed. The soil was dark gray-black clay. Filter fabric cloth was placed into the excavation before backfilling. The excavation was backfilled with gray sandy native material and pea gravel. G.W. Materials Testing performed compaction tests of the backfilled material on November 17, 1995.

SOIL SAMPLING

Soil samples were collected by ITSI personnel on November 1, 1995. Two soil samples, TS-1 and TN-2, were collected approximately 2 feet below the bottom of the UST pit excavation at a total depth of approximately 9 feet bgs. Soil samples LN-3 and LS-4 were collected from a depth of approximately 3 feet bsg from the former hydraulic lift sump excavations. Soil sample OS-5 was collected from a depth of approximately 4 feet bsg from the former wastewater separator excavation. The locations of the soil samples collected from the former UST, former hydraulic lift sumps, and former wastewater separator excavations are shown on Figure 1.

Soil samples from the bottom of the UST excavation were collected from a backhoe bucket. The bucket of the backhoe was brought to the surface for sample collection. Soil samples were collected by hand driving a 2-inch diameter by 6-inch long clean stainless steel tube into soil at each location. Soil samples were fitted on each end with a Teflon patch and covered with a plastic friction cap. Each soil sample was labeled with sample number, date and time of collection, and the samplers initials. Soil samples were sealed into plastic zip-lock bags and placed on ice in an insulated cooler. A chain of custody documented the soil sample collections and was kept with the soil samples until relinquished to Columbia Analytical Services, Inc., a California-certified laboratory for analyses.

Soil samples from the UST and wastewater separator excavations were analyzed for:

- TPH as gasoline (TPHg) by California DHS LUFT Method
- Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020
- Halogenated volatile organic compounds (HVOCs) by EPA Methods 8010
- TPH as diesel (TPHd) by DHS LUFT Method
- Semivolatile Organic Compounds (SVOCs) by EPA Methods 8270
- Total Recoverable Petroleum Hydrocarbons (TRPH) by EPA Method 418.1
- LUFT Metals by EPA Method 6010

Soil samples from the hydraulic lift excavations were analyzed for:

- TPH as hydraulic oil by DHS LUFT Method

A quantity of soil from each sample location was placed into a sealed plastic bag for field screening using a photoionization detector (PID). The PID measurements did not exceed 5 parts per million (ppm) in the UST excavation.

Analytical results of the soil samples are presented in Table 1. A copy of the laboratory report and chain of custody form for the soil samples are included in Attachment C. Analytical results for soil samples TS-1, TN-2, and OS-5 reported concentrations of Di-*n*-butyl phthalate at 1.2 mg/kg, 0.98 mg/kg, and 1.3 mg/kg, respectively. However, the method blank analyzed by the laboratory also reported Di-*n*-butyl phthalate concentrations of 1.7 mg/kg. No other SVOCs were reported in the laboratory analytical results. Analytical results for soil sample TS-1 reported HVOC concentrations of 1,4-Dichlorobenzene and 1,2-Dichlorobenzene at 16 mg/kg and 20 mg/kg, respectively. No other HVOCs were reported in the laboratory analytical results.

STOCKPILE SAMPLING

On November 30, 1995, four soil samples were collected from a 20 cubic yard stockpile of soil at the site. Soil samples were collected in clean 8-ounce glass jars. Each soil sample was labeled with sample number, date and time of collection, and the samplers initials. Soil samples were sealed into plastic zip-lock bags and placed on ice in an insulated cooler. A chain of custody documented the soil sample collections and was kept with the soil samples until relinquished to Columbia Analytical Services, Inc., a California-certified laboratory for analyses.

Soil samples from the stockpiled soil were composited by the laboratory and analyzed for:

- BTEX by EPA Method 8020
- Volatile organic compounds (VOCs) by EPA Method 8240
- SVOCs by EPA Method 8270
- TRPH by EPA Method 418.1
- TTLC Metals

A copy of the laboratory results and chain of custody form for the stockpile soil samples are included in Attachment C. The stockpiled soil was profiled and accepted for disposal at Browning-Ferris Industries (BFI) Vasco Road Sanitary Landfill. The stockpiled soil was removed and transported to BFI by American on January 8, 1996 under Non-Hazardous Special Waste and Asbestos Manifest Number 396662. A copy of the non-hazardous manifest is included in Attachment B.

SUMMARY

One 1,000-gallon, double-walled, fiberglass waste oil UST was removed from the site on November 1, 1995, along with two hydraulic lifts and one wastewater separator. The UST and associated piping were observed to be in very good condition following removal. Analytical results for soil samples collected from the UST excavation following removal indicated non-detectable concentrations of TPHg, BTEX, and TPHd. TRPH was reported in soil samples TS-1 and TN-2 at concentrations of 14 mg/kg and 53 mg/kg, respectively.

Ms. Chu from Alameda County and Ms. Stefani from the Livermore Fire Department were on site to witness and document the UST removal. The UST was transported offsite and destroyed by Erickson. The UST excavation was then backfilled using native material and pea gravel.

Please give us a call if you have any questions or comments.

Sincerely,



Jeffrey D. Hess, R.G.
Project Director

cc: Tim Johnson, Tosco Refining and Marketing Co.
Scott Hooton, BP Oil Co.

TABLE 1

**LABORATORY RESULTS FOR PETROLEUM HYDROCARBONS AND METALS
CONFIRMATION SOIL SAMPLING
NOVEMBER 1, 1995**

BP SERVICE STATION (TOSCO FACILITY NO. 11128)
4707 FIRST STREET
LIVERMORE, CALIFORNIA

Sample I.D.	Sample Depth	Petroleum Hydrocarbons (mg/kg)					Metals (mg/kg)				
		TPHg	BTEX	TPHd	TPHh	TRPH	Cd	Cr	Pb	Ni	Zn
TS-1	9.0	ND	ND	ND	-	14	ND	43	6	39	44
TN-2	9.0	ND	ND	ND	-	53	ND	37	5	37	41
LN-3	3.0	-	-	-	24	-	-	-	-	-	-
LS-4	3.0	-	-	-	ND	-	-	-	-	-	-
OS-5	4.0	ND	ND	3*	-	46	ND	17	8	25	48

"-" indicates sample not analyzed for specified constituent.

TPHg = Total petroleum hydrocarbons as gasoline

BTEX = Benzene, toluene, ethylbenzene, total xylenes

TPHd = Total petroleum hydrocarbons as diesel

TPHh = Total petroleum hydrocarbons as hydraulic oil

TRPH = Total recoverable petroleum hydrocarbons

Cd = Cadmium

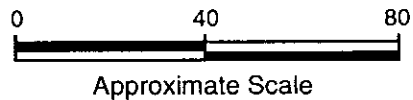
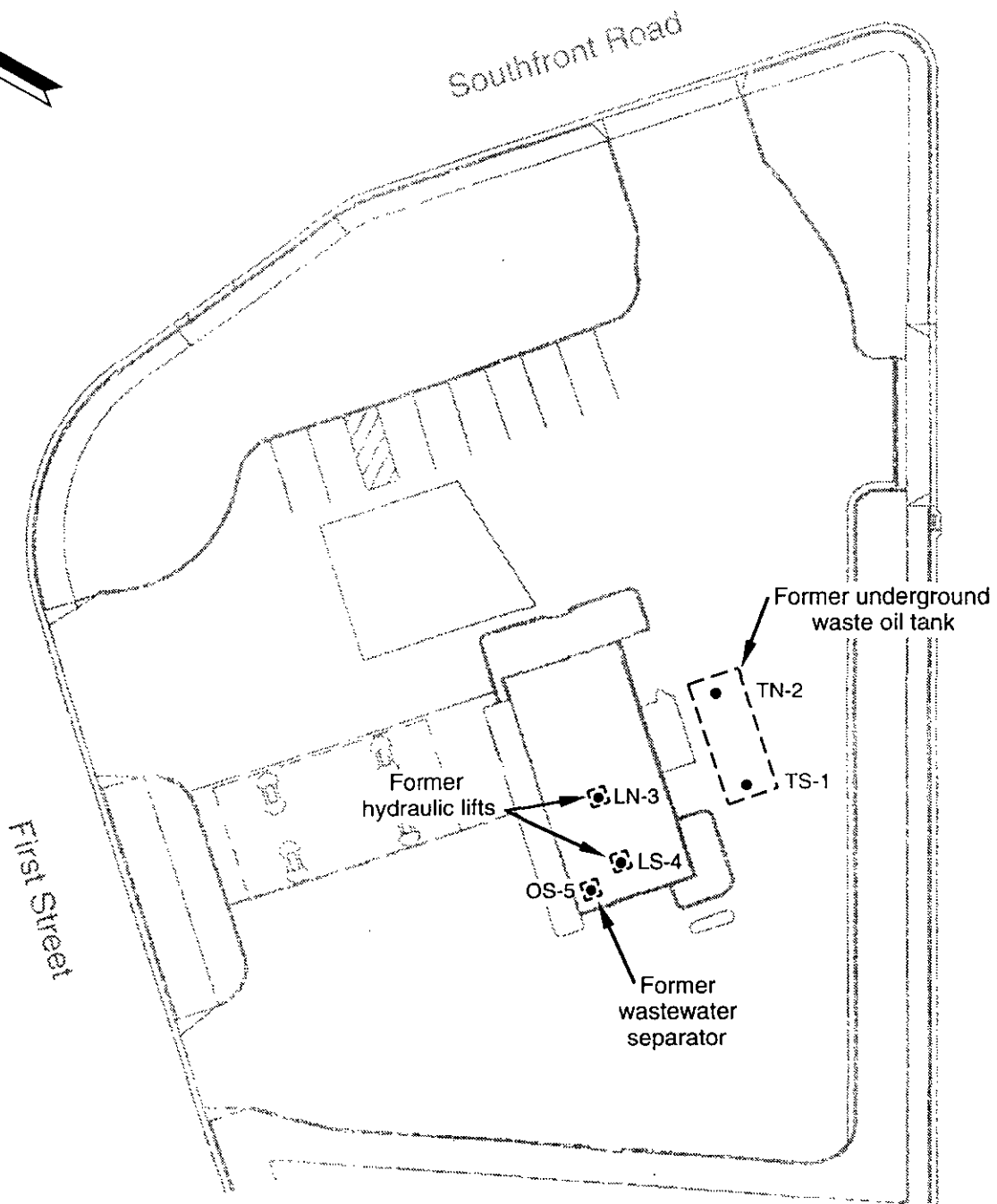
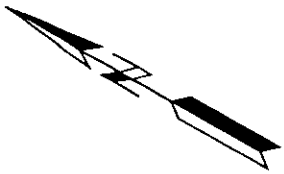
Cr = Chromium

Pb = Lead

Ni = Nickel

Zn = Zinc

* Higher boiling point range than diesel fuel. The chromatogram does not match the typical diesel finger print.



LEGEND

OS-5 • Approximate Location and Designation of Confirmation Soil Samples

FIGURE 1

SITE PLAN

BP Service Station (Tosco Facility No. 11128)
4707 First Street
Livermore, California



TOSCO REFINING AND MARKETING CO.

INNOVATIVE TECHNICAL SOLUTIONS, INC.

DEPARTMENT OF ENVIRONMENTAL HEADQUARTERS
 ENVIRONMENTAL PROTECTION DIVISION
 1131 HARBOR BAY PARKWAY, RM 250
 ALAMEDA, CA 94502-6577
 PHONE # 510/567-6700
 FAX # 510/337-9335

Project Specialist

W. Swann 9/20/95

Note changes / additions (highlighted)

ACCEPTED

Underground Storage Tank Closure Permit Application
 Alameda County Division of Hazardous Materials
 80 Swan Way, Suite 200,
 Oakland, CA 94621
 Telephone: (510) 271-4320

These closure/removal plans have been received and found to meet the requirements of the Environmental Protection Act of 1972 and the Health Law. Changes to your closure plans indicated by this Department are to ensure compliance with State and Federal laws. It is noted that proposed permits are now required for any remaining building permits for construction/demolition of a copy of the proposed plans must be on the job and available to all contractors and craftsmen involved with the removal of any remaining buildings of these plans and specifications must be submitted to this Department and by the fire and Building Department. It is recommended to submit any such changes to the relevant departments of State and local laws.

Notify this Department at least 72 hours prior to the following required inspections:

- _____ Removal of Tank(s) and Piping
- _____ Sampling
- _____ Final Inspection

Issuance of a permit to operate, 1) permanent site closure is dependent on compliance with accepted plans and all applicable laws and regulations.

***THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS!**

Contact Specialist

UNDERGROUND TANK CLOSURE PLAN

*** Complete according to attached instructions ***

1. Name of Business BP Station # 1112B
 Business Owner or Contact Person (PRINT) RYUNG OK JUNG

2. Site Address 4707 FIRST Street
 City Livermore Zip 94550 Phone (510) 447-3343

3. Mailing Address (SAME)
 City _____ Zip _____ Phone _____

4. Property Owner Tosco Northwest Company - Steve Kattner
 Business Name (if applicable) SAME
 Address 2130 Professional Drive #100
 City, State Roseville CA Zip 95661

5. Generator name under which tank will be manifested
Erickson, Inc.

EPA ID# under which tank will be manifested CA D009466392

6. Contractor American Construction & Environmental Services

Address 567 Exchange Court

City Livermore, CA 94550 Phone (510) 447-2484

License Type A HAZ ID# 702214

*Effective January 1, 1992, Business and Professional Code Section 7058.7 requires prime contractors to also hold Hazardous Waste Certification issued by the State Contractors License Board.

7. Consultant (if applicable) TAIT'S ASSOCIATES, INC. - S. White

Address 2880 Sunrise Blvd, # 206

City, State Rancho Cordova, CA 95742 Phone (916) 635-2444

8. Main Contact Person for Investigation (if applicable)
Name Larry Silva Title Environmental Mgmt.

Company TOSCO Northwest Company

Phone (916) 442-7160

9. Number of underground tanks being closed with this plan Two One

Length of piping being removed under this plan 15'

Total number of underground tanks at this facility (**confirmed with owner or operator) 4 (before removal)

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

** Underground storage tanks must be handled as hazardous waste **

a) Product/Residual Sludge/Rinsate Transporter

Name Erickson, Inc. EPA I.D. No. CAD009416392

Hauler License No. 0019 License Exp. Date 7/31/95

Address 255 Parr Blvd.

City Richmond State CA Zip 94801

b) Product/Residual Sludge/Rinsate Disposal Site

Name Erickson, Inc. EPA ID# CAD009416392

Address 255 Parr Blvd.

City Richmond State CA Zip 94801

c) Tank and Piping Transporter

Name Erickson, Inc. EPA I.D. No. CAD 0094166392
Hauler License No. 0019 License Exp. Date 7/31/95
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

d) Tank and Piping Disposal Site

Name Erickson, Inc. EPA I.D. No. CAD0094166392
Address 255 Parr Blvd.
City Richmond State CA Zip 94801

11. Sample Collector

Name Jay Johnson
Company EMCON
Address 1433 N. Market Blvd.
City Sacramento State CA Zip 95834 Phone (916) 928-3300

12. Laboratory

Name EMCON (Columbia)
Address 1433 N. Market Blvd.
City Sacramento State CA Zip 95834
State Certification No. _____

13. Have tanks or pipes leaked in the past? Yes [] No [] Unknown

If yes, describe. _____

Pump & triple rinse / steam clean

Minimum of 15 lbs dry ice / 1,000 gallon tank

Before tanks are pumped out and inerted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be permanently plugged.

The Bay Area Air Quality Management District, 415/771-6000, along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of a combustible gas indicator to verify tank inertness. It is the contractor's responsibility to bring a working combustible gas indicator on-site to verify that the tank is inert.

15. Tank History and Sampling Information *** (see instructions) ***

Tank		Material to be sampled (tank contents, soil, groundwater)	Location and Depth of Samples
Capacity	Use History include date last used (estimated)		
1,000 gallon	Waste Oil Installed - 1987 Est. last use - 9/95	Soil + Water, & encountered	AS REQ'D. One soil sample from beneath each end of tank, 1-2' into native soil.

One soil sample must be collected for every 20 linear feet of piping that is removed. A ground water sample must be collected if any ground water is present in the excavation.

Excavated/Stockpiled Soil

<p>Stockpiled Soil Volume (estimated)</p>	<p align="center">Sampling Plan</p> <p align="center">Sample 1/50 cy for disposal or 1/20 cy for re-use.</p>
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Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

Will the excavated soil be returned to the excavation immediately after tank removal? [] yes [] no [X] unknown

If yes, explain reasoning _____

If unknown at this point in time, please be aware that excavated soil may not be returned to the excavation without prior approval from Alameda County. This means that the contractor, consultant, or responsible party must communicate with the Specialist IN ADVANCE of backfilling operations.

16. Chemical methods and associated detection limits to be used for analyzing samples:
The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed.
See attached Table 2.

17. Submit Site Health and Safety Plan (See Instructions) - Enclosed.

Contaminant Sought	EPA or Other Sample Preparation Method Number	EPA or Other Analysis Method Number	Method Detection Limit
TPH-G TPH-D TOG BTEX			
Cl-HC	8010 or 8240		
Cd, Cr, Pb, Ni, Zn	ICAP or AA		
Semi-volatiles	8270		

18. Submit Worker's Compensation Certificate copy

Name of Insurer State Compensation Insurance Fund

19. Submit Plot Plan ***** (See Instructions) *****

20. Enclose Deposit (See Instructions)

21. Report any leaks or contamination to this office within 5 days of discovery.

The written report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report (ULR) form.

22. Submit a closure report to this office within 60 days of the tank removal. The report must contain all information listed in item 22 of the instructions.

23. Submit State (Underground Storage Tank Permit Application) Forms A and B (one B form for each UST to be removed) (mark box 8 for "tank removed" in the upper right hand corner)

I declare that to the best of my knowledge and belief that the statements and information provided above are correct and true.

I understand that information, in addition to that provided above, may be needed in order to obtain approval from the Environmental Protection Division and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

CONTRACTOR INFORMATION

Name of Business Terris Stacks of Am Constr. + Env. Services wild

Name of Individual _____ *the signature page*

Signature _____ Date See next page

PROPERTY OWNER OR MOST RECENT TANK OPERATOR (Circle one)

Name of Business TOSCO Northwest Company

Name of Individual Steven J. Kattner

Signature [Signature] Date 6/15/95

Submit Worker's Compensation

Name of Insurer State Fund

- 19. Submit Plot Plan ***** (See Instructions) *****
- 20. Enclose Deposit (See Instructions)
- 21. Report any leaks or contamination to this office within 5 days of discovery.
The written report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report (ULR) form.
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CONTRACTOR INFORMATION

Name of Business American Construction

Name of Individual Terri L. Stack

Signature Terri L. Stack Date 9/18/95

PROPERTY OWNER OR MOST RECENT TANK OPERATOR (Circle one)

Name of Business _____

Name of Individual _____

Signature _____ Date _____

CITY OF LIVERMORE

FIRE DEPARTMENT FIRE PREVENTION BUREAU

4550 East Avenue, Livermore CA 94550
(510) 373-5003

FIRE CODE PERMIT

PERMIT NO: 95-6023 O

EFFECTIVE DATE: October 1995 EXPIRATION DATE: October 1996

Under the provisions of the Uniform Fire Code of the City of Livermore, having made application in accordance therewith, a permit is hereby granted for the following:

PERMITTED ACTIVITY

FEE: \$320

REMOVE ONE UNDERGROUND STORAGE TANK

Permit Issued To: AMERICAN CONSTRUCTION & ENVIRONMENTAL SERV.
567 EXCHANGE CT, LIVERMORE, CA 447-2484

Address of Premises: 4707 FIRST ST., LIVERMORE, CA

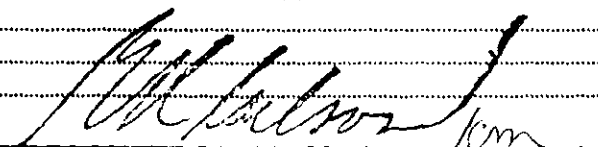
Occupant: BP STATION #11128

This permit does not take the place of any license required by law and is not transferrable. Any change in the use, occupancy, or plans shall require a new or modified permit.

This permit is issued and accepted on condition that all provisions of the currently adopted edition of the Uniform Fire Code of the City of Livermore be complied with. Any violations of the provisions may be grounds for the revocation of this permit.

ADDITIONAL COMMENTS AND/OR REQUIREMENTS:

Explosimeter must be ON SITE and calibrated in Inspector's presence.

ISSUED BY: 

Eric R. Carlson, Fire Marshal/cm

DATE: 10/24/95

THIS PERMIT MUST BE KEPT POSTED AT ALL TIMES ON THE PREMISES MENTIONED ABOVE



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

SEP 19 1995

REGULATION 8, RULE 40 NOTIFICATION FORM

Check Removal or Replacement of Tanks
 Excavation of Contaminated Soil

PAID

SITE INFORMATION

Site Address 4707 First Street

City, State Livermore CA

Zip 94550

Owner Name Tesco Northwest (SF store)

Specific location of project Corner of 1st and 2nd Streets

Tank Removal

Scheduled startup date Nov. 1 95

Vapors removed by:

- Water wash
- Vapor freeing (CO²)
- Ventilation

Indicate below if an A/C was obtained for tank replacement:

Yes No If yes, A/C or P/O # _____

Contaminated Soil Excavation

Scheduled Startup Date Nov. 1 95

Stockpiles will be covered? Yes No

Indicate below the method used to comply with Regulation 8, Rule 40, Section 402.4:

Check (✓) 8-40-301 8-40-302 (permit required)

A/C or P/O # _____

A/C = Authority to Construct P/O = Permit to Operate

What other public agency have you notified (e.g., Fire District, Hazardous Materials Department, City or County)?

Agency County of Alameda Contact John Doe Phone # () _____

BAAQMD # _____ CONTRACTOR INFORMATION

Name American Construction Contact Terr Stack

Address 567 Exchange Court Phone (510) 447-2484

City, State, Zip Livermore CA 94550

CONSULTANT INFORMATION (if applicable)

Name [Signature] Contact _____

Address _____ Phone () _____

City, State, Zip _____

FOR OFFICE USE ONLY

Date Received Fax: _____ Date Postmarked: _____

Inspector No: _____ Date: _____ By: _____

Update: Contact Name _____ Date: _____ By: _____

Update: Contact Name _____ Date: _____ By: _____

See reverse for instructions

LIVERMORE FIRE DEPARTMENT

FIRE INSPECTION REPORT

Address: 1707 First St. Suite: _____
 Business Name: B.P. Station Type of Business: Gas Station
 Contact Person: _____ Phone: _____

Violations

Violations must be corrected immediately. A follow-up inspection will be conducted in approximately _____ days to confirm the corrections have been completed. Violations which are not corrected may pose fire and life-safety hazards. The accompanying Inspection Report Requirement List for a description of each violation noted below.

Violation Code	Notes	Date and Initial Corrections
	O ₂ - 0.5 @ 1428	
	LEL - 0.90 @ 1428	
	Waste oil tank Removal	
	Double wall fiberglass	

Inspection Cycle History

Status	Date	By
Initial		
Reinspection 1		
Reinspection 2		

- Emergency Contact Information Sheet Update given to contact person
- Permits: Welding Flam/Comb Liquid Assembly HazMat Other _____
- No violations Noted. By: _____ Date: _____
- All violations corrected By: _____ Date: _____
- Technical issues referred to Fire Prevention by (inspector): _____ Date: _____
- Failure to correct violations referred to Fire Prevention by (Division Chief) _____ Date: _____

Inspectors Name (print): Danielle Stefani Phone: 373-545 5003

Dates and times to contact: M-F 8-5

Circle the Correct Occupancy: B/F-1/F-2/M/S-1/S-2 E-1,E-2 R-1 B-1/S-3/H-4 A-2.1/A-3

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF
ENVIRONMENTAL HEALTH
Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy
Alameda CA 94502
510/567-6700

II, III

Site ID # _____ Site Name BP 01 # 1126 Today's Date 11/01/75

Site Address 4707 1st St

City Livermore Zip 94501 Phone _____

MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- ____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- ____ II. Hazardous Materials Business Plan, Acutely Hazardous Materials
- III. Under ground Storage Tanks Removal

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments:

1962 0.5702
1000 gal f/g double welded waste oil tank - in good condition
w/ cracks, creases, flaws.

① ②

Fill end

① SS at ~9' dark grey/bk clay - very plastic - No obvious odor

② SS at ~9' dark grey/bk clay - very plastic, very stiff. No obvious odor

Analyze for TALLG, TALLD, BTEX, TUG, VOCs, SVOCs and metals
Cd, Cr, Pb, Ni, and Zn

Contact Rick C. Fears/Jeff Hess
Title Project Supervisor
Signature [Signature]

Inspector _____
Signature [Signature]

II, III

TELEPHONE
(510) 235-1393

CERTIFIED SERVICES COMPANY

255 Parr Boulevard - Richmond, California 94801

NO. 10240

CUSTOMER
GOLDEN WEST BU
JOB NO.
866930

FOR: ERICKSON, INC. TANK NO. 16776

LOCATION: RICHMOND DATE: 95/11/15 TIME: 16:15

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT UO

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 1000 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1%
ERICKSON, INC. HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN
CUT OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS
WASTE FACILITY.
ERICKSON, INC HAS THE APPROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK
SHIPPED TO US FOR PROCESSING.

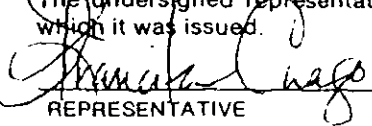
In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.


 REPRESENTATIVE

TITLE


 INSPECTOR

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. Manifest Document No. 2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
 B.P. Station #1128 4707 First Street
 Livermore CA 94550

A. State Manifest Document Number
 95592586

4. Generator's Phone 510-447-3343

B. State Generator's ID No.

5. Transporter 1 Company Name Erickson Inc. 6. US EPA ID Number CA10009466392

C. State Transporter's ID No. 6165971

7. Transporter 2 Company Name

D. Transporter's Phone 510-235-1393

9. Designated Facility Name and Site Address
 Erickson, Inc.
 255 Parr Blvd.
 Richmond, CA. 94801

E. State Transporter's ID No.

F. Transporter's Phone

G. State Facility's ID No. CA10009466392
 H. Facility's Phone (510)235-1393

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste Number
	No.	Type			
a. NON-RCRA Hazardous Waste Solid Waste Empty Storage Tank.	0101	TIP	110610	P	EPA/CRA NONE
b.					EPA/CRA
c.					EPA/CRA
d.					EPA/CRA

15. Special Handling Instructions and Additional Information
 Keep away from sources of ignition. Always wear hardhats when working around U.G.S.T.'s 24 Hr. Contact Name: David Darrow Phone 510-447-3343

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Harold Spahn Agent for B.P. Station
 Signature: [Signature]
 Month: 11 Day: 10 Year: 1995

17. Transporter 1 Acknowledgement of Receipt of Materials
 Printed/Typed Name: Robert Nouri
 Signature: [Signature]
 Month: 11 Day: 10 Year: 1995

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

19. Discrepancy Indication Space
 1. GENERATOR'S US EPA ID NO
 CAR000 000273

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
 Printed/Typed Name: DAVID STU
 Signature: [Signature]
 Month: 11 Day: 10 Year: 1995

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-854-7330



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 396662

Section I - GENERATOR

a. Generator Name: Tesco b. Generating Location: Tesco # 1128
 c. Address: 601 Plain St Ste # 2500 d. Address: 567 Exchange Ct
Seattle Wa 98101 Livermore CA
 e. Phone No.: 206-442-7434 f. Phone No.: _____
 If owner of the generating facility differs from the generator, provide:

g. Owner's Name: _____ h. Owner's Phone No.: _____

i. BFI WASTE CODE: CA 405 010596 239661 Containers: _____
 j. Description of Waste: Petroleum contaminated soil Quantity: _____ Unit: _____ No. _____ TYPE: _____
 TYPE: DM - METAL DRUM, OP - PLASTIC DRUM, B - BAG, BA - 5 ML. PLASTIC BAG or WRAP, T - TRUCK, O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

[Signature] Generator Authorized Agent (Print) [Signature] Signature 010896 Shipment Date

Section II - TRANSPORTER

TRANSPORTER I
 a. Name: American Construction & Exc
 b. Address: 567 Exchange Ct
Livermore Ca
 c. Driver Name/Title: Sam Higon
 d. Phone No.: (510) 447-2424 e. Truck No.: 608
 f. Vehicle License No./State: 3P17614 CA

TRANSPORTER II
 a. Name: _____
 b. Address: _____
 c. Driver Name/Title: _____
 d. Phone No.: _____ e. Truck No.: _____
 f. Vehicle License No./State: _____

Acknowledgement of Receipt of Materials:
[Signature] 010896 Shipment Date

Acknowledgement of Receipt of Materials:
 _____ Shipment Date

Section III - DESTINATION

a. Site Name: BFI c. Phone No.: 510-447-0491
 b. Physical Address: 4001 N. Vasco Rd d. Mailing Address: _____
Livermore, Ca

e. Discrepancy Indication Space: _____
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.
[Signature] 010896 Receipt Date

Section IV - OPERATOR

a. Operator's Name: _____ b. Operator's Phone No.: _____
 c. Operator's Address: _____

d. Special Handling Instructions and additional information: _____
 OPERATOR'S CERTIFICATION: I hereby declare that the contents of the containers are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

e. Operator's Name & Title: _____ Operator's Signature: _____

f. Name and Address of Responsible Agency: _____

g. Friable; Non-friable; Both _____ % friable _____ % non-friable
 * Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or removed, or the demolition or removal operator, or both.

DESTINATION RETAIN

FD-750 5-85



November 13, 1995

Service Request No: S951374

Jeff Hess
ITSI
2855 Mitchell Drive #118
Walnut Creek, CA 94598

Re: 95-125

Dear Mr. Hess:

The following pages contain analytical results for sample(s) received by the laboratory on November 2, 1995. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above -to help expedite our service please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 22, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely:

A handwritten signature in black ink, appearing to read "S L Green", written over a horizontal line.

Steven L. Green
Project Chemist

SLG/ajb

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

AZLA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRU/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste. Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITS1
 Project: TOSCO - Livermore / 95-125
 Sample Matrix: Soil

Service Request: S951374
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: 11/10/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270A
 Units: mg/Kg (ppm)
 Dry Weight Basis

Sample Name:	TS-1, 9.0'	TN-2, 9.0'	OS-5, 4.0'
Lab Code:	110105	110105	110105
Date Analyzed:	11/10/95	11/10/95	11/10/95

Base Neutral Analyte	MRL			
Bis(2-chloroethyl) Ether	0.1	ND	ND	ND
1,2-Dichlorobenzene	0.1	ND	ND	ND
1,3-Dichlorobenzene	0.1	ND	ND	ND
1,4-Dichlorobenzene	0.1	ND	ND	ND
Bis(2-chloroisopropyl) Ether	0.1	ND	ND	ND
N-Nitrosodi-n-propylamine	0.1	ND	ND	ND
Hexachloroethane	0.1	ND	ND	ND
Nitrobenzene	0.1	ND	ND	ND
Isophorone	0.1	ND	ND	ND
Bis(2-chloroethoxy)methane	0.1	ND	ND	ND
1,2,4-Trichlorobenzene	0.1	ND	ND	ND
Naphthalene	0.1	ND	ND	ND
4-Chloroaniline	0.2	ND	ND	ND
Hexachlorobutadiene	0.1	ND	ND	ND
2-Methylnaphthalene	0.1	ND	ND	ND
Hexachlorocyclopentadiene	0.1	ND	ND	ND
2-Chloronaphthalene	0.5	ND	ND	ND
2-Nitroaniline	0.1	ND	ND	ND
Dimethyl Phthalate	0.5	ND	ND	ND
Acenaphthylene	0.1	ND	ND	ND
3-Nitroaniline	0.5	ND	ND	ND
Accnaphthene	0.1	ND	ND	ND
Dibenzofuran	0.1	ND	ND	ND
2,4-Dinitrotoluene	0.1	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITS1
 Project: TOSCO - Livermore / 95-125
 Sample Matrix: Soil

Service Request: S951374
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: 11/10/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270A
 Units: mg/Kg (ppm)
 Dry Weight Basis

Sample Name:	TS-1, 9.0'	TN-2, 9.0'	OS-5, 4.0'
Lab Code:	110105	110105	110105
Date Analyzed:	11/10/95	11/10/95	11/10/95

Base Neutral Analyte	MRL			
2,6-Dinitrotoluene	0.2	ND	ND	ND
Diethyl Phthalate	0.5	ND	ND	ND
4-Chlorophenyl Phenyl Ether	0.1	ND	ND	ND
Fluorene	0.1	ND	ND	ND
4-Nitroaniline	0.5	ND	ND	ND
N-Nitrosodiphenylamine	0.1	ND	ND	ND
4-Bromophenyl Phenyl Ether	0.1	ND	ND	ND
Hexachlorobenzene	0.1	ND	ND	ND
Phenanthrene	0.1	ND	ND	ND
Anthracene	0.1	ND	ND	ND
Di-n-butyl Phthalate	0.5	1.2	0.98	1.3
Fluoranthene	0.1	ND	ND	ND
Pyrene	0.1	ND	ND	ND
Butylbenzyl Phthalate	0.5	ND	ND	ND
3,3'-Dichlorobenzidine	0.2	ND	ND	ND
Benz(a)anthracene	0.1	ND	ND	ND
Bis(2-ethylhexyl) Phthalate	0.5	ND	ND	ND
Chrysene	0.1	ND	ND	ND
Di-n-octyl Phthalate	0.5	ND	ND	ND
Benzo(b)fluoranthene	0.1	ND	ND	ND
Benzo(k)fluoranthene	0.2	ND	ND	ND
Benzo(a)pyrene	0.05	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.2	ND	ND	ND
Dibenz(a,h)anthracene	0.2	ND	ND	ND
Benzo(g,h,i)perylene	0.2	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITSJ
 Project: TOSCO - Livermore / 95-125
 Sample Matrix: Soil

Service Request: S951374
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: 11/10/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270A
 Units: mg/Kg (ppm)
 Dry Weight Basis

Sample Name:	TS-1, 9.0'	TN-2, 9.0'	OS-5, 4.0'
Lab Code:	110105	110105	110105
Date Analyzed:	11/10/95	11/10/95	11/10/95

Acid Analyte	MRL	TS-1, 9.0'	TN-2, 9.0'	OS-5, 4.0'
Phenol	0.1	ND	ND	ND
2-Chlorophenol	0.1	ND	ND	ND
Benzyl Alcohol	0.2	ND	ND	ND
o-Methylphenol	0.1	ND	ND	ND
m- and p-Methylphenol*	0.2	ND	ND	ND
2-Nitrophenol	0.1	ND	ND	ND
2,4-Dimethylphenol	0.1	ND	ND	ND
Benzoic Acid		ND	ND	ND
2,4-Dichlorophenol	0.1	ND	ND	ND
4-Chloro-3-methylphenol	0.2	ND	ND	ND
2,4,6-Trichlorophenol	0.1	ND	ND	ND
2,4,5-Trichlorophenol	0.1	ND	ND	ND
2,4-Dinitrophenol	0.5	ND	ND	ND
4-Nitrophenol	0.5	ND	ND	ND
2-Methyl-4,6-dinitrophenol	0.5	ND	ND	ND
Pentachlorophenol	0.5	ND	ND	ND

* Quantified as 4-methylphenol.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITSJ
 Project: TOSCO - Livermore / 95-125
 Sample Matrix: Soil

Service Request: S951374
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: 11/10/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270A
 Units: mg/Kg (ppm)
 Dry Weight Basis

Sample Name: Method Blank
 Lab Code: blank
 Date Analyzed: 11/10/95

Base Neutral Analyte	MRL	
Bis(2-chloroethyl) Ether	0.1	ND
1,2-Dichlorobenzene	0.1	ND
1,3-Dichlorobenzene	0.1	ND
1,4-Dichlorobenzene	0.1	ND
Bis(2-chloroisopropyl) Ether	0.1	ND
N-Nitrosodi-n-propylamine	0.1	ND
Hexachloroethane	0.1	ND
Nitrobenzene	0.1	ND
Isophorone	0.1	ND
Bis(2-chloroethoxy)methane	0.1	ND
1,2,4-Trichlorobenzene	0.1	ND
Naphthalene	0.1	ND
4-Chloroaniline	0.2	ND
Hexachlorobutadiene	0.1	ND
2-Methylnaphthalene	0.1	ND
Hexachlorocyclopentadiene	0.1	ND
2-Chloronaphthalene	0.5	ND
2-Nitroaniline	0.1	ND
Dimethyl Phthalate	0.5	ND
Acenaphthylene	0.1	ND
3-Nitroaniline	0.5	ND
Acenaphthene	0.1	ND
Dibenzofuran	0.1	ND
2,4-Dinitrotoluene	0.1	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: JTSI
 Project: TOSCO - Livermore / 95-125
 Sample Matrix: Soil

Service Request: S951374
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: 11/10/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270A
 Units: mg/Kg (ppm)
 Dry Weight Basis

Sample Name: Method Blank
 Lab Code: blank
 Date Analyzed: 11/10/95

Base Neutral Analyte	MRL	
2,6-Dinitrotoluene	0.2	ND
Diethyl Phthalate	0.5	ND
4-Chlorophenyl Phenyl Ether	0.1	ND
Fluorene	0.1	ND
4-Nitroaniline	0.5	ND
N-Nitrosodiphenylamine	0.1	ND
4-Bromophenyl Phenyl Ether	0.1	ND
Hexachlorobenzene	0.1	ND
Phenanthrene	0.1	ND
Anthracene	0.1	ND
Di-n-butyl Phthalate	0.5	1.7
Fluoranthene	0.1	ND
Pyrene	0.1	ND
Butylbenzyl Phthalate	0.5	ND
3,3'-Dichlorobenzidine	0.2	ND
Benz(a)anthracene	0.1	ND
Bis(2-ethylhexyl) Phthalate	0.5	ND
Chrysene	0.1	ND
Di-n-octyl Phthalate	0.5	ND
Benzo(b)fluoranthene	0.1	ND
Benzo(k)fluoranthene	0.2	ND
Benzo(a)pyrene	0.05	ND
Indeno(1,2,3-cd)pyrene	0.2	ND
Dibenz(a,h)anthracene	0.2	ND
Benzo(g,h,i)perylene	0.2	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITSJ
 Project: TOSCO - Livermore / 95-125
 Sample Matrix: Soil

Service Request: S951374
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: 11/10/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270A
 Units: mg/Kg (ppm)
 Dry Weight Basis

Sample Name:	Method Blank
Lab Code:	blank
Date Analyzed:	11/10/95

Acid Analyte	MRL	
Phenol	0.1	ND
2-Chlorophenol	0.1	ND
Benzyl Alcohol	0.2	ND
o-Methylphenol	0.1	ND
m- and p-Methylphenol*	0.2	ND
2-Nitrophenol	0.1	ND
2,4-Dimethylphenol	0.1	ND
Benzoic Acid	0.1	ND
2,4-Dichlorophenol	0.2	ND
4-Chloro-3-methylphenol	0.1	ND
2,4,6-Trichlorophenol	0.1	ND
2,4,5-Trichlorophenol	0.5	ND
2,4-Dinitrophenol	0.5	ND
4-Nitrophenol	0.5	ND
2-Methyl-4,6-dinitrophenol	0.5	ND
Pentachlorophenol	0.5	ND

* Quantified as 4-methylphenol.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITS1
 Project: TOSCO-Livermore/#95-125
 Sample Matrix: Soil

Service Request: L9503927
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: NA

Halogenated Volatile Organic Compounds
 EPA Methods 5030/8010
 Units: ug/Kg (ppb)

Analyte	MRL	Sample Name:	TS-1 9.0'	TN-2 9.0'	OS-5 4.0'
		Lab Code:	L9503927-001	L9503927-002	L9503927-005
		Date Analyzed:	11/9/95	11/8/95	11/8/95
Dichlorodifluoromethane (CFC 12)	10		ND	ND	ND
Chloromethane	10		ND	ND	ND
Vinyl Chloride	10		ND	ND	ND
Bromomethane	10		ND	ND	ND
Chloroethane	10		ND	ND	ND
Trichlorofluoromethane (CFC 11)	5		ND	ND	ND
1,1-Dichloroethene	5		ND	ND	ND
Methylene Chloride	20		ND	ND	ND
trans-1,2-Dichloroethene	5		ND	ND	ND
cis-1,2-Dichloroethene	5		ND	ND	ND
1,1-Dichloroethane	5		ND	ND	ND
Chloroform	5		ND	ND	ND
1,1,1-Trichloroethane (TCA)	5		ND	ND	ND
Carbon Tetrachloride	5		ND	ND	ND
1,2-Dichloroethane	5		ND	ND	ND
Trichloroethene (TCE)	5		ND	ND	ND
1,2-Dichloropropane	5		ND	ND	ND
Bromodichloromethane	5		ND	ND	ND
2-Chloroethyl Vinyl Ether	50		ND	ND	ND
trans-1,3-Dichloropropene	5		ND	ND	ND
cis-1,3-Dichloropropene	5		ND	ND	ND
1,1,2-Trichloroethane	5		ND	ND	ND
Tetrachloroethene (PCE)	5		ND	ND	ND
Dibromochloromethane	5		ND	ND	ND
Chlorobenzene	5		ND	ND	ND
Bromoform	5		ND	ND	ND
1,1,2,2-Tetrachloroethane	5		ND	ND	ND
1,3-Dichlorobenzene	10		ND	ND	ND
1,4-Dichlorobenzene	10		16	ND	ND
1,2-Dichlorobenzene	10		20	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: IFSI
Project: TOSCO-Livermore/#95-125
Sample Matrix: Soil

Service Request: L9503927
Date Collected: NA
Date Received: NA
Date Extracted: NA

Halogenated Volatile Organic Compounds
 EPA Methods 5030/8010
 Units: ug/Kg (ppb)

Sample Name:	Method Blank	Method Blank
Lab Code:	L9503927-MB	L9503927-MB
Date Analyzed:	11/8/95	11/9/95

Analyte	MRL		
Dichlorodifluoromethane (CFC 12)	10	ND	ND
Chloromethane	10	ND	ND
Vinyl Chloride	10	ND	ND
Bromomethane	10	ND	ND
Chloroethane	10	ND	ND
Trichlorofluoromethane (CFC 11)	5	ND	ND
1,1-Dichloroethene	5	ND	ND
Methylene Chloride	20	ND	ND
trans-1,2-Dichloroethene	5	ND	ND
cis-1,2-Dichloroethene	5	ND	ND
1,1-Dichloroethane	5	ND	ND
Chloroform	5	ND	ND
1,1,1-Trichloroethane (TCA)	5	ND	ND
Carbon Tetrachloride	5	ND	ND
1,2-Dichloroethane	5	ND	ND
Trichloroethene (TCE)	5	ND	ND
1,2-Dichloropropane	5	ND	ND
Bromodichloromethane	5	ND	ND
2-Chloroethyl Vinyl Ether	50	ND	ND
trans-1,3-Dichloropropene	5	ND	ND
cis-1,3-Dichloropropene	5	ND	ND
1,1,2-Trichloroethane	5	ND	ND
Tetrachloroethene (PCE)	5	ND	ND
Dibromochloromethane	5	ND	ND
Chlorobenzene	5	ND	ND
Bromoform	5	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND
1,3-Dichlorobenzene	10	ND	ND
1,4-Dichlorobenzene	10	ND	ND
1,2-Dichlorobenzene	10	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITSJ
Project: TOSCO - Livermore / 95-125
Sample Matrix: Soil

Service Request: S951374
Date Collected: 11/1/95
Date Received: 11/2/95
Date Extracted: NA
Date Analyzed: 11/6/95

BTEX and TPH as Gasoline
 EPA Methods 5030/8020/California DHS LUFT Method
 As Received Basis

Analyte:	TPH as Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes, Total
Units:	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
Method Reporting Limit:	1	0.005	0.005	0.005	0.005

Sample Name	Lab Code	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes, Total
TS-1 9.0'	S951374-001	ND	ND	ND	ND	ND
TN-2 9.0'	S951374-002	ND	ND	ND	ND	ND
OS-5 4.0'	S951374-005	ND	ND	ND	ND	ND
Method Blank	S951106-SB	ND	ND	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITSI
Project: TOSCO - Livermore / 95-125
Sample Matrix: Soil

Service Request: S951374
Date Collected: 11/1/95
Date Received: 11/2/95
Date Extracted: 11/8/95
Date Analyzed: 11/8/95

TPH as Diesel
California DHS LUFT Method
Units: mg/Kg (ppm)
As Recieved Basis

Sample Name	Lab Code	MRL	Result
TS-1 9.0'	S951374-001	1	ND
TN-2 9.0'	S951374-002	1	ND
OS-5 4.0'	S951374-005	1	3 *
Method Blank	S951108-SB	1	ND

* This sample contains higher boiling point hydrocarbons quantified as diesel. The chromatogram does not match the typical diesel fingerprint.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITS1
Project: TOSCO-Livermore/#95-125
Sample Matrix: Soil

Service Request:
Date Collected:
Date Received:
Date Extracted:
Date Analyzed:

Total Recoverable Petroleum Hydrocarbons (TRPH)
EPA Method 418.1
Units: mg/Kg (ppm)

Sample Name	Lab Code	MRL	Result
TS-1 9.0	L9503927-001	10	14
TN-2 9.0'	L9503927-002	10	53
OS-5 4.0'	L9503927-005	10	46
Method Blank	L9503927-MB	10	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITS
 Project: TOSCO-Livermore/#95-125
 Sample Matrix: Soil

Service Request: L9503927
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: NA

Total Metals
 Units: mg/Kg (ppm)

Sample Name:	TS-1 9.0'	TN-2 9.0'	OS-5 4.0'
Lab Code:	L9503927-001	L9503927-002	L9503927-005
Date Analyzed:	11/7/95	11/7/95	11/7/95

Analyte	EPA Method	MRL	TS-1 9.0'	TN-2 9.0'	OS-5 4.0'
Cadmium	3050/6010	1	ND	ND	ND
Chromium	3050/6010	2	43	37	17
Lead	3050/6010	5	6	5	8
Nickel	3050/6010	5	39	37	25
Zinc	3050/6010	1	44	41	48

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITSJ
Project: TOSCO-Livermore/#95-125
Sample Matrix: Soil

Service Request: L9503927
Date Collected: NA
Date Received: NA
Date Extracted: NA

Total Metals
Units: mg/Kg (ppm)

Sample Name: Method Blank
Lab Code: L9503927-MB
Date Analyzed: 11/7/95

Analyte	EPA Method	MRL	
Cadmium	3050/6010	1	ND
Chromium	3050/6010	2	ND
Lead	3050/6010	5	ND
Nickel	3050/6010	5	ND
Zinc	3050/6010	1	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITS
Project: TOSCO - Livermore / 95-125
Sample Matrix: Soil

Service Request: S951374
Date Collected: 11/1/95
Date Received: 11/2/95
Date Extracted: 11/5/95
Date Analyzed: 11/5,6/95

TPH as Hydraulic Oil
California DHS LUFT Method
Units: mg/Kg (ppm)
As Received Basis

Sample Name	Lab Code	MRL	Result
LN-3 3.0'	S951374-003	5	24
LS-4 3.0'	S951374-004	5	ND
Method Blank	S951105-SB	5	ND

APPENDIX A

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ITS1
 Project: TOSCO-Livermore/#95-125
 Sample Matrix: Soil

Service Request: S951374
 Date Collected: 11/1/95
 Date Received: 11/2/95
 Date Extracted: 11/10/95
 Date Analyzed: 11/10/95

Surrogate Recovery Summary
 Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270A

Sample Name	Lab Code	P e r c e n t R e c o v e r y					
		NB5	FBP	PTP14	P5	2FP	246TBP
TS-1, 9.0'	110105	77	64	105	67	81	72
TN-2, 9.0'	110106	69	67	109	67	71	68
OS-5, 4.0'	110107	90	70	110	85	88	78
Method Blank	blank	86	71	107	82	83	80

Acceptance Limits: 23-120 30-115 18-137 24-113 25-121 19-122

NB5 Nitrobenzene -D5
 FBP 2-Fluorobiphenyl
 PTP14 p-Terphenyl-D14
 P5 Phenol-D5
 2FP 2-Fluorophenol
 246TBP 2,4,6-Tribromophenol

QA/QC Report

Client: ITSJ
Project: TOSCO-Livermore/#95-125
Sample Matrix: Soil

Service Request: L9503927
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Halogenated Volatile Organic Compounds
EPA Methods 5030/8010

Sample Name	Lab Code	Percent Recovery 4-Bromochlorobenzene
TS-1 9.0'	L9503927-001	77
TN-2 9.0'	L9503927-002	79
OS-5 4.0'	L9503927-005	70
Method Blank	L9503927-MB	99
Method Blank	L9503927-MB	76

CAS Acceptance Limits: 70-125

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ITS1
Project: TOSCO - Livermore / 95-125
Sample Matrix: Soil

Service Request: S951374
Date Collected: 11/1/95
Date Received: 11/2/95
Date Extracted: NA
Date Analyzed: 11/6/95

Surrogate Recovery Summary
TPH as Gasoline/BTEX
EPA Methods 5030/8020/California DHS LUFT Method

Sample Name	Lab Code	PID Detector Percent Recovery 4-Bromofluorobenzene	FID Detector Percent Recovery α,α,α -Trifluorotoluene
TS-1 9.0'	S951374-001	97	109
TN-2 9.0'	S951374-002	92	91
OS-5 4.0'	S951374-005	85	102
Method Blank	S951106-SB	92	109

CAS Acceptance Limits: 51-137 51-137

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ITSJ
Project: TOSCO - Livermore / 95-125
Sample Matrix: Soil

Service Request: S951374
Date Collected: 11/1/95
Date Received: 11/2/95
Date Extracted: 11/8/95
Date Analyzed: 11/8/95

Surrogate Recovery Summary
TPH as Diesel
California DHS LUFT Method

Sample Name	Lab Code	Percent Recovery p-Terphenyl
TS-1 9.0'	S951374-001	85
TN-2 9.0'	S951374-002	76
OS-5 4.0'	S951374-005	77
Method Blank	S951108-SB	85

CAS Acceptance Limits: 41-140

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ITS1
Project: TOSCO - Livermore / 95-125
Sample Matrix: Soil

Service Request: S951374
Date Collected: 11/1/95
Date Received: 11/2/95
Date Extracted: 11/5/95
Date Analyzed: 11/5,6/95

Surrogate Recovery Summary
TPH as Hydraulic Oil
California DHS LUFT Method

Sample Name	Lab Code	Percent Recovery p-Terphenyl
LN-3 3.0'	S951374-003	87
LS-4 3.0'	S951374-004	100
Method Blank	S951105-SB	88

CAS Acceptance Limits: 41-140



1921 Ringwood Ave. • San Jose, CA 95131 • (408) 437-2400 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9501374 P.O.# _____ PAGE 1 OF 1

PROJECT NAME <u>Tosco-Livermore # 95-125</u>					ANALYSIS REQUESTED															
PROJECT MGR <u>Jeff Hess</u>																				
COMPANY/ADDRESS <u>ITSI</u> <u>2855 MITCHELL Drive Suite 118</u> <u>Walnut Creek, CA 94598</u> PHONE <u>(510) 256-8998</u> FAX <u>(510) 256-8998</u>																				
SAMPLERS SIGNATURE <u>Rick L. Fears</u>																				
SAMPLE I.D.	DATE	PM TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	HP	HCl	HCl	HCl	NP	HCl	HCl	HNO ₃	NP	H ₂ SO ₄	H ₂ SO ₄	H ₂ SO ₄	REMARKS	
TS-1	9.0'	11/1/95	2:30	1 SOIL	1	X	X	X	X		X	X								
TN-2	9.0'	11/1/95	2:40	2 SOIL	1	X	X	X	X		X	X								
LN-3	3.0'	11/1/95	2:50	3 SOIL	1												X			
LS-4	3.0'	11/1/95	3:00	4 SOIL	1												X			
OS-5	4.0'	11/1/95	4:20	5 SOIL	1	X	X	X	X		X	X								

RELINQUISHED BY: <u>Rick L. Fears</u> Signature Printed Name Firm Date/Time	RECEIVED BY: <u>Jeanne Brown</u> Signature Printed Name Firm Date/Time	RELINQUISHED BY: Signature Printed Name Firm Date/Time	RECEIVED BY: Signature Printed Name Firm Date/Time	TURNAROUND REQUIREMENTS 24 hr _____ 48 hr <u>X</u> 3-5 day _____ Standard (10-15 working days) Provide Verbal Preliminary Results <u>X</u> Provide FAX preliminary Results Requested Report Date <u>11-9</u>	REPORT REQUIREMENTS I. Routine Report II. Report (includes CUP, MMSO, as required, may be charged as samples) III. Data Validation Report (includes All Raw Data) RVOGB (MOLs/POLs/TRACE#)
--	---	--	--	---	---

RELINQUISHED BY: <u>Jeanne Brown</u> Signature Printed Name Firm Date/Time	RECEIVED BY: Signature Printed Name Firm Date/Time	SPECIAL INSTRUCTIONS/COMMENTS: Circle which metals are to be analyzed: Metals: Al Sh Ba Be B <u>Cd</u> Ca <u>Cr</u> Cu Co Fe Mg Mn Mo <u>Ni</u> K Ag Na Sn V <u>Zn</u> As <u>Pb</u> Se Tl Hg DIRECT BILL TOSCO (TIM JOHNSON). SEND RESULTS TO ITSI (JEFF HESS).
---	--	--



December 8, 1995

Service Request No: S9501527

Jeff Hess
ITSI
2855 Mitchell Drive #118
Walnut Creek, CA 94598

Re: Tosco-Livermore / 95-127

Dear Mr. Hess:

The following pages contain analytical results for sample(s) received by the laboratory on December 1, 1995. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above -to help expedite our service please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 13, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely:

A handwritten signature in black ink, appearing to read 'SLG', with a long horizontal flourish extending to the right.

Steven L. Green
Project Chemist

SLG/ajb

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, II A, and II B.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Innovative Technical Solutions, Inc
Project: TOSCO-Livermore/#95-127
Sample Matrix: Soil

Service Request: L9504197
Date Collected: 11/30/95
Date Received: 12/1/95
Date Extracted: 12/5/95
Date Analyzed: 12/5/95

Total Recoverable Petroleum Hydrocarbons (TRPH)
EPA Method 418.1
Units: mg/Kg (ppm)

Sample Name	Lab Code	MRL	Result
STOCKPILE (1, 2, 3, 4)*	L9504197-001	10	73
Method Blank	L9504197-MB	10	ND

* Composite

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Innovative Technical Solutions, Inc.
 Project: TOSCO-Livermore/#95-127
 Sample Matrix: Soil

Service Request: L9504197
 Date Collected: 11/30/95
 Date Received: 12/1/95
 Date Digested: 12/5/95

CAM TTLC Metals
 Units: mg/Kg (ppm)

	STOCKPILE -	
Sample Name:	(1, 2, 3, 4)*	Method Blank
Lab Code:	L9504197-001	L9504197-MB
Date Analyzed:	12/5/95	12/5/95

Analyte	EPA Method	MRL		
Antimony	3050/6010	10	ND	ND
Arsenic	3050/7060	5	ND	ND
Barium	3050/6010	1	230	ND
Beryllium	3050/6010	0.5	ND	ND
Cadmium	3050/6010	1	ND	ND
Chromium	3050/6010	2	32	ND
Cobalt	3050/6010	2	9	ND
Copper	3050/6010	2	20	ND
Lead	3050/6010	5	12	ND
Mercury	7471	0.2	ND	ND
Molybdenum	3050/6010	10	ND	ND
Nickel	3050/6010	5	40	ND
Selenium	3050/7740	5	ND	ND
Silver	3050/6010	1	ND	ND
Thallium	3050/7841	5	ND	ND
Vanadium	3050/6010	2	34	ND
Zinc	3050/6010	1	45	ND

* Composite

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITS
 Project: Tosco - Livermore /95-127
 Sample Matrix: Soil

Service Request: S9501527
 Date Collected: 11/30/95
 Date Received: 12/1/95
 Date Extracted: NA

Volatile Organic Compounds
 EPA Method 8240
 Units: ug/Kg (ppb)
 As Received Basis

Sample Name: Stock Pile 1-4 Method Blank
 Lab Code: S9501527-005 S951205-SB
 Date Analyzed: 12/5/95 12/5/95

Analyte	MRL		
Chloromethane	5	ND	ND
Vinyl Chloride	5	ND	ND
Bromomethane	5	ND	ND
Chloroethane	5	ND	ND
Trichlorofluoromethane (CFC 11)	5	ND	ND
Trichlorotrifluoroethane (CFC 113)	10	ND	ND
1,1-Dichloroethene	5	ND	ND
Acetone	50	ND	ND
Carbon Disulfide	5	ND	ND
Methylene Chloride	10	36	ND
trans-1,2-Dichloroethene	5	ND	ND
cis-1,2-Dichloroethene	5	ND	ND
2-Butanone (MEK)	10	ND	ND
1,1-Dichloroethane	5	ND	ND
Chloroform	5	ND	ND
1,1,1-Trichloroethane (TCA)	5	ND	ND
Carbon Tetrachloride	5	ND	ND
Benzene	5	ND	ND
1,2-Dichloroethane	5	ND	ND
Vinyl Acetate	10	ND	ND
Trichloroethene (TCE)	5	ND	ND
1,2-Dichloropropane	5	ND	ND
Bromodichloromethane	5	ND	ND
2-Chloroethyl Vinyl Ether	5	ND	ND
trans-1,3-Dichloropropene	5	ND	ND
4-Methyl-2-pentanone (MIBK)	10	ND	ND
2-Hexanone	10	ND	ND
Toluene	5	ND	ND
cis-1,3-Dichloropropene	5	ND	ND
1,1,2-Trichloroethane	5	ND	ND
Tetrachloroethene (PCE)	5	ND	ND
Dibromochloromethane	5	ND	ND
Chlorobenzene	5	ND	ND
Ethylbenzene	5	ND	ND
Styrene	5	ND	ND
Total Xylenes	5	ND	ND
Bromoform	5	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND
1,3-Dichlorobenzene	5	ND	ND
1,4-Dichlorobenzene	5	ND	ND
1,2-Dichlorobenzene	5	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Innovative Technical Solutions, Inc
Project: TOSCO-Livermore/#95-127
Sample Matrix: Soil

Service Request: L9504197
Date Collected: 11/30/95
Date Received: 12/1/95
Date Extracted: 12/5/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270
 Units: mg/Kg (ppm)

	STOCKPILE -	
Sample Name:	(1, 2, 3, 4)*	Method Blank
Lab Code:	L9504197-001	L9504197-MB
Date Analyzed:	12/5/95	12/5/95

Base Neutral Analyte	MRL		
N-Nitrosodimethylamine	0.3	ND	ND
Aniline	0.3	ND	ND
Bis(2-chloroethyl) Ether	0.3	ND	ND
1,2-Dichlorobenzene	0.3	ND	ND
1,3-Dichlorobenzene	0.3	ND	ND
1,4-Dichlorobenzene	0.3	ND	ND
Bis(2-chloroisopropyl) Ether	0.3	ND	ND
N-Nitrosodi-n-propylamine	0.3	ND	ND
Hexachloroethane	0.3	ND	ND
Nitrobenzene	0.3	ND	ND
Isophorone	0.3	ND	ND
Bis(2-chloroethoxy)methane	0.3	ND	ND
1,2,4-Trichlorobenzene	0.3	ND	ND
Naphthalene	0.3	ND	ND
4-Chloroaniline	0.3	ND	ND
Hexachlorobutadiene	0.3	ND	ND
2-Methylnaphthalene	0.3	ND	ND
Hexachlorocyclopentadiene	0.3	ND	ND
2-Chloronaphthalene	0.3	ND	ND
2-Nitroaniline	2	ND	ND
Dimethyl Phthalate	0.3	ND	ND
Acenaphthylene	0.3	ND	ND
3-Nitroaniline	2	ND	ND
Acenaphthene	0.3	ND	ND
Dibenzofuran	0.3	ND	ND
2,4-Dinitrotoluene	0.3	ND	ND

* Composite

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Innovative Technical Solutions, Inc.
 Project: TOSCO-Livermore/#95-127
 Sample Matrix: Soil

Service Request: L9504197
 Date Collected: 11/30/95
 Date Received: 12/1/95
 Date Extracted: 12/5/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270
 Units: mg/Kg (ppm)

	STOCKPILE -	
Sample Name:	(1, 2, 3, 4)*	Method Blank
Lab Code:	L9504197-001	L9504197-MB
Date Analyzed:	12/5/95	12/5/95

Base Neutral Analyte	MRL		
2,6-Dinitrotoluene	0.3	ND	ND
Diethyl Phthalate	0.3	ND	ND
4-Chlorophenyl Phenyl Ether	0.3	ND	ND
Fluorene	0.3	ND	ND
4-Nitroaniline	2	ND	ND
N-Nitrosodiphenylamine	0.3	ND	ND
4-Bromophenyl Phenyl Ether	0.3	ND	ND
Hexachlorobenzene	0.3	ND	ND
Phenanthrene	0.3	ND	ND
Anthracene	0.3	ND	ND
Di-n-butyl Phthalate	0.3	ND	ND
Fluoranthene	0.3	ND	ND
Pyrene	0.3	ND	ND
Butylbenzyl Phthalate	0.3	ND	ND
3,3'-Dichlorobenzidine	0.3	ND	ND
Benzo(a)anthracene	0.3	ND	ND
Bis(2-ethylhexyl) Phthalate	0.3	ND	ND
Chrysene	0.3	ND	ND
Di-n-octyl Phthalate	0.3	ND	ND
Benzo(b)fluoranthene	0.3	ND	ND
Benzo(k)fluoranthene	0.3	ND	ND
Benzo(a)pyrene	0.3	ND	ND
Indeno(1,2,3-c,d)pyrene	0.3	ND	ND
Dibenz(a,h)anthracene	0.3	ND	ND
Benzo(g,h,i)perylene	0.3	ND	ND
Pyridine	0.6	ND	ND

* Composite

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Innovative Technical Solutions, Inc.
 Project: TOSCO-Livermore/#95-127
 Sample Matrix: Soil

Service Request: L9504197
 Date Collected: 11/30/95
 Date Received: 12/1/95
 Date Extracted: 12/5/95

Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270
 Units: mg/Kg (ppm)

	STOCKPILE -	
Sample Name:	(1, 2, 3, 4)*	Method Blank
Lab Code:	L9504197-001	L9504197-MB
Date Analyzed:	12/5/95	12/5/95

Acid Analyte	MRL		
Phenol	0.3	ND	ND
2-Chlorophenol	0.3	ND	ND
Benzyl Alcohol	0.3	ND	ND
2-Methylphenol	0.3	ND	ND
3- and 4-Methylphenol*	0.3	ND	ND
2-Nitrophenol	0.3	ND	ND
2,4-Dimethylphenol	0.3	ND	ND
Benzoic Acid	2	ND	ND
2,4-Dichlorophenol	0.3	ND	ND
4-Chloro-3-methylphenol	0.3	ND	ND
2,4,6-Trichlorophenol	0.3	ND	ND
2,4,5-Trichlorophenol	0.3	ND	ND
2,4-Dinitrophenol	2	ND	ND
4-Nitrophenol	2	ND	ND
2-Methyl-4,6-dinitrophenol	2	ND	ND
Pentachlorophenol	2	ND	ND

* Quantified as 4-Methylphenol.

* Composite

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ITSJ
Project: Tosco - Livermore /95-127
Sample Matrix: Soil

Service Request: S9501527
Date Collected: 11/30/95
Date Received: 12/1/95
Date Extracted: NA
Date Analyzed: 12/4/95

BTEX
EPA Methods 5030/8020
As Received Basis

Analyte:	Benzene	Toluene	Ethyl- benzene	Xylenes, Total
Units:	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
Method Reporting Limit:	0.005	0.005	0.005	0.005

Sample Name	Lab Code	Benzene	Toluene	Ethyl- benzene	Xylenes, Total
Stock Pile 1-4	S9501527-005	ND	ND	ND	ND
Method Blank	S951204-SB	ND	ND	ND	ND

APPENDIX A

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ITSI
 Project: Tosco - Livermore /95-127
 Sample Matrix: Soil

Service Request: S9501527
 Date Collected: 11/30/95
 Date Received: 12/1/95
 Date Extracted: NA
 Date Analyzed: 12/5/95

Surrogate Recovery Summary
 Volatile Organic Compounds
 EPA Method 8240

Sample Name	Lab Code	P e r c e n t R e c o v e r y		
		1,2-Dichloroethane-D ₄	Toluene-D ₈	4-Bromofluorobenzene
Stock Pile 1-4	S9501527-005	104	105	97
Method Blank	S951205-SB	107	107	97

CAS Acceptance Limits: 70-121 81-117 74-121

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Innovative Technical Solutions, Inc.
 Project: TOSCO-Livermore/#95-127
 Sample Matrix: Soil

Service Request: L9504197
 Date Collected: NA
 Date Received: NA
 Date Extracted: NA
 Date Analyzed: NA

Surrogate Recovery Summary
 Base Neutral/Acid Semivolatile Organic Compounds
 EPA Methods 3550/8270

Sample Name	Lab Code	2FP	P e r c e n t			R e c o v e r y		
			PHL	TBP	NBZ	FBP	TPH	
STOCKPILE (1, 2, 3, 4)**	L9504197-001	98	105	76	78	84	96	
Method Blank	L9504197-MB	114	*	73	93	90	117	

CAS Acceptance Limits: 25-121 24-113 19-122 23-128 30-115 18-137

2FP 2-Fluorophenol
 PHL Phenol-D6
 TBP 2,4,6-Tribromophenol
 NBZ Nitrobenzene-D5
 FBP 2-Fluorobiphenyl
 TPH Terphenyl-D14

* The USEPA allows up to two surrogate recoveries (one acid and one base/neutral) to be outside of acceptance limits, without requiring reanalysis, according to the 2/88 Contract Laboratory Program Statement of work.
 ** Composite

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Project: Tosco - Livermore /95-127
Sample Matrix: Soil

Service Request: S9501527
Date Collected: 11/30/95
Date Received: 12/1/95
Date Extracted: NA
Date Analyzed: 12/4/95

Surrogate Recovery Summary
BTEX
EPA Methods 5030/8020

Sample Name	Lab Code	PID Detector
		Percent Recovery 4-Bromofluorobenzene
Stock Pile 1-4	S9501527-005	81
Method Blank	S951204-SB	92

CAS Acceptance Limits:

51-137

51-137

Send to: Steve Green
Columbra Analytical Services
1921 Ringwood Avenue
San Jose, CA 95131
(408) 437-2400

SR# 59501527

PROJECT NAME: Tosco - Livermore
PROJECT NUMBER: 95-127
SITE LOCATION: Livermore, CA.

CHAIN OF CUSTODY

DATE: 11/30/95
PAGE: 1 of 1

SAMPLE I.D.	SAMPLE DEPTH	DATE	TIME	NUMBER OF CONTAINERS	TYPE OF CONTAINERS	SAMPLE MATRIX	ANALYSIS										SPECIAL INSTRUCTIONS/ NOTES/ COMMENTS	TOTAL NUMBER OF ANALYSES	
							TPH as Gas/BTEX - 8015/8020	TPH as Diesel - 8015	TEPH - 8015	TRPH - 418.1 +	Oil and Grease - 5520 D&F	LUFT Metals (Cd, Cr, Ni, Pb, Zn)	CAM 17 Metals +	VOCs - 8240	SVOCs - 8270 +	BTEX - 8020			
Stockpile 1	1	11/30	11:00	1	802	Soil				X		X	X	X	X		Composite into one sample! 5	5	
" 2	2	↓	11:03	1	802	↓			X		X	X	X	X					
" 3	3	↓	11:05	1	802	↓			X		X	X	X	X					
" 4	4	↓	11:10	1	802	↓			X		X	X	X	X					
				TOTAL NUMBER OF CONTAINERS	4	TOTAL TESTS			1		1	1	1	1				5	

SAMPLED BY: Jeff Hess SIGNATURE: [Signature] SPECIAL INSTRUCTIONS/COMMENTS: 5-day turnaround time. Send results to Jeff Hess @ ITSI, and direct bill Tosco in Seattle

RELINQUISHED BY: Jeff Hess [Signature] ITSI 11/30, 4 p.m.
RECEIVED BY: J. Brown [Signature] CAS 12-1-95 1100
RELINQUISHED BY: J. Brown [Signature] CAS 12-1-95 1800
RECEIVED BY: CAS-L [Signature]

SEND RESULTS TO: Jeff Hess @ ITSI Send bill to Tim Johnson @ Tosco Due 12/8

CAS-L: 418.1, Title 22 Metals, 8270