



# Uriah Inc.

*An Environmental Services Company*

LIMITED ENVIRONMENTAL ASSESSMENT  
AT

SUNOL COMMUNICATIONS CENTER  
3700 PALOMARES ROAD, SUNOL, CA

JUNE 9, 1990



# Uriah Inc.

An Environmental Services Company

June 9, 1990

Mr. Ron Sadler  
Sunol Communications  
1333 Willow Pass Road  
Concord, CA 94520

RE: Limited Environmental Assessment at the Sunol Communications Site, Palomares Road, Sunol, CA

Dear Mr. Sadler:

Upon receipt of your authorization, Uriah staff undertook and have completed a limited environmental assessment at the referenced site in order to determine the extent of known diesel fuel contamination of soil and prepare recommendations for remedial action. As you are aware, the area of concern is at the Northwest corner of the communications building where a 2,000 gallon, underground, diesel fuel storage tank and associated 7 gallon, above ground, day tank are located. A leak in the day tank resulted in the loss of an estimated 65 gallons of diesel fuel. When the tank pit was uncovered for repairs, diesel fuel ran into the tank pit, around the North corner of the (communications) building, and some 40 feet down the hillside. Subsequent to this time, and prior to Uriah initiating its investigation, Sunol Communications staff excavated a portion of the diesel fuel contaminated soils by hand. The area of excavation extended from surface to between one and two feet below grade along the northern face of the communications building. These soils have been stockpiled atop a nearby parking lot.

above ground?

## METHODOLOGY

Although Uriah staff were unable to sample soils beneath the diesel storage tanks due to the presence of base rock fill material, the tank is scheduled to be removed in the near future and sampling may be undertaken at that time.

Samplings of other impacted soils (i.e. along the slope) were undertaken from a depth of 0"-6" with a pick and shovel. For the purposes of this investigation, the slope area was divided

into three sections:

- 1) "Upper Plateau"- This area is comprised of a plateau approximately four (4) foot square. It is the point initially impacted by the leaking diesel fuel and immediately precedes a significant downward slope. A discrete soil sample was obtained as described below and submitted for certified analysis for Total Petroleum Hydrocarbons as Diesel fuel (TPH-D) using EPA Methods 3550/8015.
- 2) "Middle Slope"- This is the portion of the area under investigation with the greatest degree of inclination and, therefore, where residual contamination would seem the least likely. Here, a soil sample was acquired from each of three points for composite laboratory analysis for TPH-D.
- 3) "Lower Slope and Base Plateau"- This appeared to be the down slope area most likely to be impacted by migrating diesel fuel. Soil was acquired at the four points of greatest probable contaminating for compositing into a single sample for laboratory analysis for TPH-D. These points were: A) Adjacent to the concrete footing of the main communications tower; B) The West side of the concrete step; C) The North side of the concrete step; and D) The East side of the concrete step where the slope plateaus. Each of the sampling points are areas in which the diesel fuel would be expected to pool.

Soil beyond the base plateau was inspected and found to be free of discoloration and odor consistent with fuel hydrocarbon contamination.

Soil at each sampling point was first loosened with a clean pick. Cobbles and other larger materials were then removed and the remaining soil pressed into a clean brass sampling tube 1.92 inches by 6.0 inches in diameter. The ends of each sampling tube were promptly wrapped with aluminum foil, fitted with plastic caps, wrapped with black electrical tape, labeled, and placed on dry ice for transport to a certified hazardous waste analytical laboratory under chain of custody.

The results of the sampling described are outlined in the following chart:

Sample Number	TPH-D (parts per million)
1	360
2 A-C	170
3 A-D	1,300

TPH-D...Total Petroleum Hydrocarbons as Diesel

Subsequent to receipt of the results of laboratory analyses of Samples #1, 2 A-C, and 3 A-D, authorization was received to acquire additional samples at depths between 2½' and 3' below grade within the areas previously sampled in order to determine the extent of vertical migration and initiate the development of a remedial action plan. The second sampling from the area designated "Upper Slope" consisted of a single, discrete sample from approximately two (2) feet below grade. In consideration of both overhead and underlying lines in the area of concern, no attempt was made to sample below this depth. The specific sampling point was also moved immediately East of Sample #1. Additional sampling of the "Middle Slope" involved acquisition of two samples, each at a depth of approximately three (3) feet. These samples were composited into a single sample at the laboratory for analysis for TPH-D. Further sampling of the "Lower Slope and Base Plateau" involved the acquisition of three samples, one each from the western edge of the concrete footing for the main communications tower, the northern edge of the concrete step, and the East side of the concrete steps where the slope plateaus. Each of these samples were acquired from a depth of approximately three (3) feet below grade.

In consideration of conditions previously described, Uriah's sample acquisition protocol was modified and soils were first loosened with a rotary hammer and then excavated with a clean pick and shovel. Cobbles and other large material were again removed and the remaining soils pressed into a clean brass sampling tube (1.92 inches in diameter by 6.0 inches in length) to form a consolidated sample. Each tube was sealed, marked, and transported to a certified laboratory as previously described. The results of the second round of analyses may be summarized as follows:

Sample Number**	TPH-D (parts per million)
4	1,900
5 A-B	33
6 A-C	100

\*\*For purposes of clarity, these samples have been renumbered. On the attached chain of custody, these samples are identified as #1, #2 A-B, and #3 A-C respectively.

TPH-D...Total Petroleum Hydrocarbons as Diesel

LABORATORY RESULTS

Copies of all certified analyses as received from the certified hazardous waste analytical laboratory are enclosed as Appendix

"A".

### CONCLUSIONS AND RECOMMENDATIONS

Levels of diesel contamination were found to decrease with depth in the "Middle Slope" and "Lower Slope and Base Plateau" areas; while a significant increase in contaminant concentrations was found to exist between the near surface and approximately three (3) feet below grade at the "Upper Plateau".

In consideration of conditions present at the site, it is proposed that contaminated soils be remediated using biological detoxification procedures. Contaminated soils may either be excavated and remediated on site, or treated in place. In either case, contaminated soils would be amended with a select mushroom compost and liquid inoculum containing a consortium of non-pathogenic, hydrocarbon utilizing bacteria and fungi capable of the thorough aerobic biodegradation of diesel fuel to form the non-toxic end products of carbon dioxide, minerals, and water.

Soils undergoing treatment would be monitored for temperature, moisture, pH, oxygen, and degradation rates and adjusted as necessary throughout the treatment process in order to maintain ranges appropriate to optimum degradation. If soils are to be treated in place, moisture levels would be carefully controlled with the use of a drip system and monitored with lysimeters to ensure that liquid nutrients and inoculum would be applied at a rate sufficiently slow as to preclude forcing contaminants downward towards groundwater (the depth to which will be determined through a search of appropriate agency records). Interim sampling would also be performed at appropriate intervals throughout the treatment process and analyzed in the field using an uncertified liquid to liquid extraction process with a detection limit for diesel in soil of 5 parts per million (ppm). Based upon data obtained from interim field analysis, final certified sampling would be performed. One discrete sample would be obtained for each 20 cubic yards of soil under treatment by driving a clean brass sample tube (1.92 inches in diameter and 6.0 inches in length) into the soil at varying depths at randomly selected points. The ends of each tube would then be wrapped in aluminum foil, fitted with plastic caps, sealed with black electrical tape, labeled, placed on dry ice, and then transported under chain of custody to a certified hazardous waste analytical laboratory for analysis for TPH-G using EPA Methods 3550/8015.

Copies of this report have been included for your convenience. It is recommended that one be forwarded to each of the following agencies for their review:


San Francisco Bay Region Water Quality Control Board  
1800 Harrison Street, Suite 700

Oakland, CA 94621  
Attention: Vijay Patel

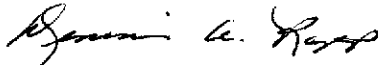
Alameda County Health Care Services Agency  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, CA 94621  
Attention: Gil Wistar

Should you have any questions regarding the above, or if we may otherwise be of assistance, please contact either of the undersigned at (415) 455-4991.

Sincerely,



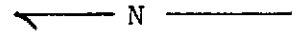
Helen Mawhinney  
Senior Environmental Specialist  
and



Denise A. Rapp  
Vice-President, Uriah, Inc.  
HM/DAR:ms  
enc.

URIAH ENVIRONMENTAL SERVICES, INC.  
 AT:  
 SUNOL COMMUNICATIONS CENTER  
 3700 PALOMARES ROAD, SUNOL, CA

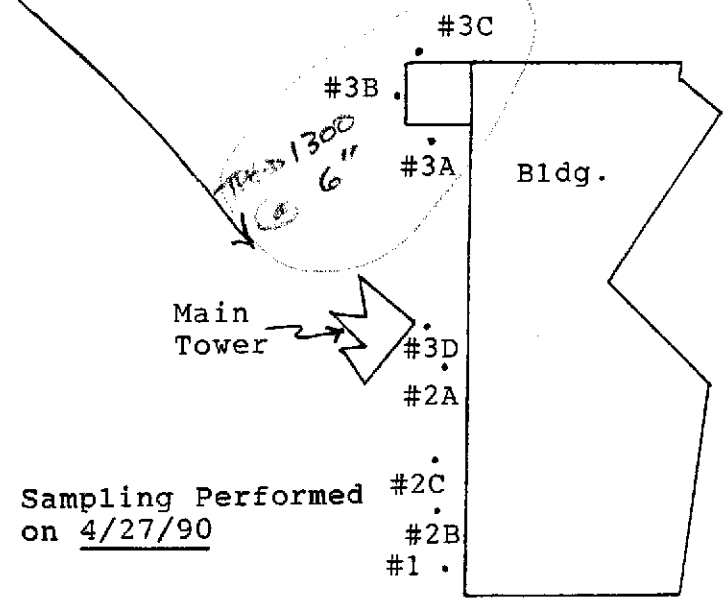
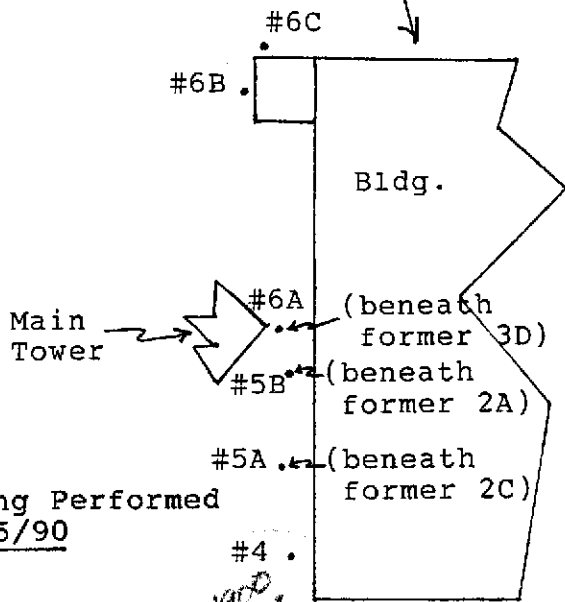
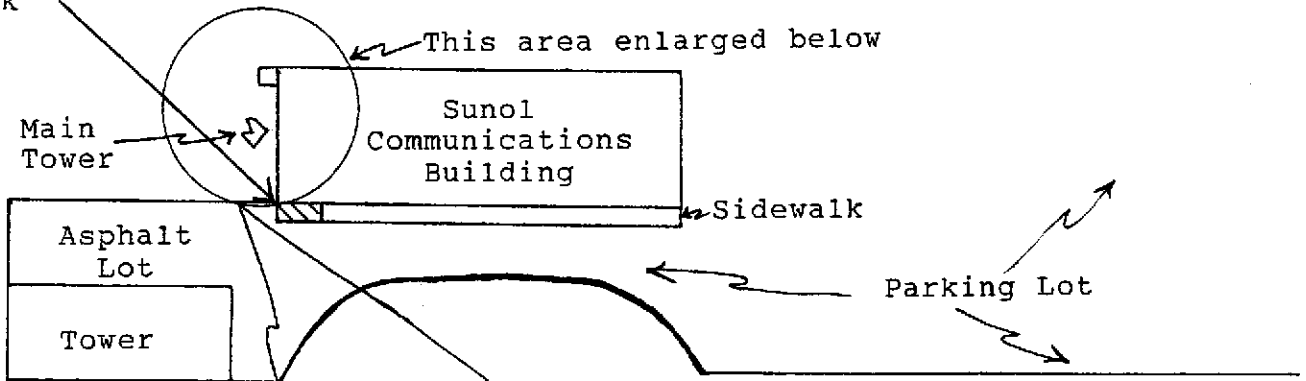
Site Map

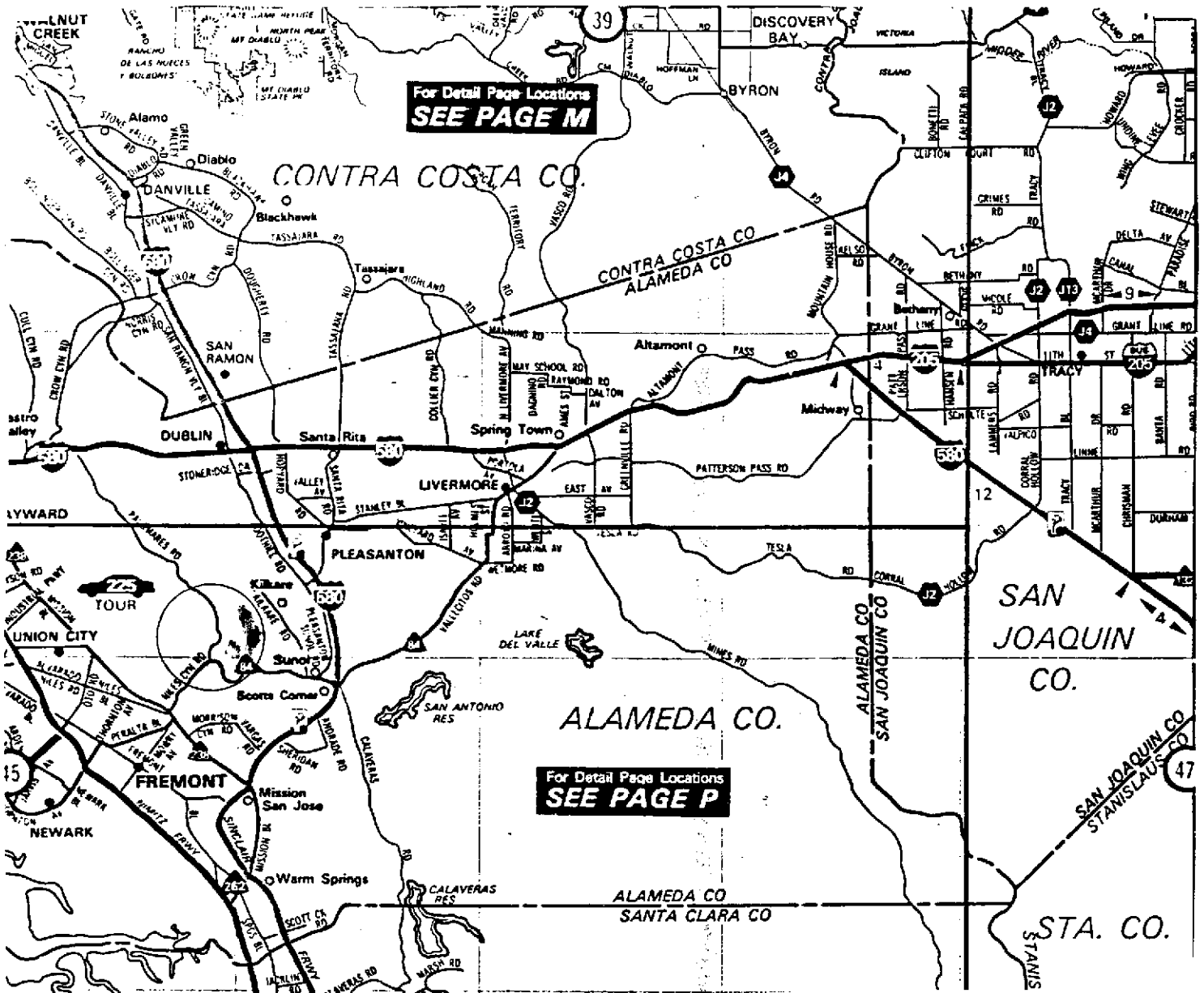


Scale:  
 1" = 50'

Scale for enlargement  
 below:  
 1" = 12.5'

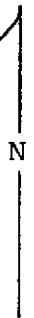
Location of 1- 2,000 gallon  
 underground diesel storage tank  
 and 1- 7 gallon above ground  
 day tank





URIAH ENVIRONMENTAL SERVICES, INC.  
 AT:  
 SUNOL COMMUNICATIONS CENTER  
 3700 PALOMARES ROAD, SUNOL, CA

Scale:  
 1" = 5 miles





**CHROMALAB, INC.**

Analytical Laboratory  
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#233)
- Drinking Water (#955)
- Waste Water
- Consultation

May 2, 1990

ChromaLab File No.: 0490118

URIAH, INC.

Attn: Helen Mawhinney

RE: Three soil samples for Diesel analysis

Project Name: SUNOL DEVELOPMENT CO.

Project Number: 11790 MISA

Duration of Analysis: April 28-May 1, 1990

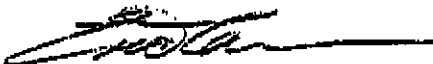
RESULTS:

Sample No.	<u>Diesel (mg/Kg)</u>
1	360
2 A-C*	170
3 A-D*	1300
BLANK	N.D.
SPIKE RECOVERY	109.1%
DETECTION LIMIT	5
METHOD OF ANALYSIS	3550/8015

\*Composited samples

ChromaLab, Inc.

David Duong  
Senior Chemist

  
Eric Tam  
Laboratory Director

# CHROMALAB, INC.

Analytical Laboratory  
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#238)
- Drinking Water (#955)
- Waste Water
- Consultation

May 22, 1990

ChromaLab File No.: 0590105

URIAH ENVIRONMENTAL SERVICES, INC.

Attn: Helen Mawhinney

RE: Three soil samples for Diesel analysis

Project Name: SUNOL COMMUNICATION

Project Number: 11790MISA

Date Sampled: May 15, 1990

Date Submitted: May 15, 1990

Date Extracted: May 18-21, 1990

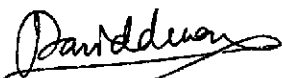
Date Analyzed: May 18-21, 1990

## RESULTS:

Sample No.	Diesel (mg/Kg)
#1	1900
#2 A,B*	33
#3 A,B,C*	100
BLANK	N.D.
SPIKED RECOVERY	84.2%
DUPLICATED SPIKE RECOVERY	84.9%
DETECTION LIMIT	5
METHOD OF ANALYSIS	3550/8015

\*Composited samples

ChromaLab, Inc.



David Duong  
Senior Chemist



Eric Tam  
Laboratory Director

**URIAH ENVIRONMENTAL SERVICES, INC.  
CHAIN OF CUSTODY**

\*\*\*\*For Office Use Only\*\*\*\*

Project Name: Sunol Development Co. Job# 11790 MISA

SAMPLING COMPLETED: 12:00 AM/PM, DATE: 4-27-90 BY: Helix + Jerry  
 SITE NAME AND ADDRESS: Sunol Development Company  
Sunol Communication Site, 3700 Palomares Rd. Sunol  
 REGULATORY AGENCY REPRESENTATIVE PRESENT: None  
 REGULATORY AGENCY REPRESENTATIVE TITLE: N/A  
 LAB USED: Chroma LAB ON SITE? yes/no  
 SAMPLE TO LAB VIA? Lab Rep  Uriah Staff  Courier

SAMPLE#	SOIL/WATER PRODUCT	ANALYZE FOR	# OF CONTAINERS	SINGLE/ COMPOSITE
<u>1</u>	<u>soil</u>	<u>TPH-Diesel</u>	<u>1</u>	<u>S</u>
<u>2A-C</u>	<u>soil</u>	<u>↓</u>	<u>3</u>	<u>C</u>
<u>3A-D</u>	<u>soil</u>	<u>↓</u>	<u>4</u>	<u>C</u>

**SAMPLE RELEASED BY:** Alex Muehling 3:30 AM/PM, 4/27/90  
**SAMPLE ACCEPTED BY:** Madeleine North 2:30 AM/PM, 4/27/90  
 \_\_\_\_\_ : \_\_\_\_\_ AM/PM, \_\_\_\_/\_\_\_\_/90  
 \_\_\_\_\_ : \_\_\_\_\_ AM/PM, \_\_\_\_/\_\_\_\_/90  
 \_\_\_\_\_ : \_\_\_\_\_ AM/PM, \_\_\_\_/\_\_\_\_/90  
 TURN AROUND: Routine RESULTS TO URIAHS BY: \_\_\_\_\_

