



May 5, 1992

General Electric Company  
Vallecitos Nuclear Center  
P.O. Box 460, Vallecitos Road  
Pleasanton, CA 94566

Attention: Ravi Arulanantham  
Alameda County Department of Environmental Health  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, California 94621

Subject: Workplan for bioremediation of approximately 10 cubic yards of soil containing diesel fuel at the General Electric Company Vallecitos Nuclear Center, Pleasanton, California.

Dear Mr. Arulanantham:

This letter presents a workplan to bioremediate a small volume of soil containing detectable diesel fuel. Approximately 10 cubic yards of soil was excavated during removal of diesel fuel tank piping at the "300 Area", General Electric Company Vallecitos Nuclear Center (GE-VNC). The soil is currently stored on site in 43 drums. Analytical test results of samples collected from the drums and excavated trench floor are given on Table 1 (attached). Analytical test results indicated total petroleum hydrocarbons (TPH)-as-diesel concentrations ranging from 61-to-13,000 ppm (parts per million) for the soil stored in these 55-gallon drums. Test results from samples taken from the excavation trench floor indicated non-detect for TPH-as-diesel at reporting limits of 1 ppm.

GE-VNC proposes to conduct on-site bioremediation of these soils to reduce the concentration of diesel hydrocarbons to below 100 ppm. Soil treatment will be conducted by our environmental consultant Science & Engineering Analysis Corporation (SEACOR). GE-VNC then proposes to reuse the soil on site as fill material. The following details specific work steps to be conducted:

#### *TREATMENT AREA PREPARATION*

A concrete pad approximately 15 feet by 40 feet will be used as the treatment area. The pad is walled on two sides with concrete blocks. The remaining two sides will be enclosed by the construction of berms using clean soil. The pad and the berms will then be lined with double layers of 6 mil plastic sheeting.

#### *SOIL PLACEMENT AND PREPARATION*

The diesel contaminated soil will be placed onto the treatment pad and spread out to a uniform thickness using a "bobcat" type mini tractor. The soil moisture will be brought up to approximately 60 percent capacity using clean water. Additionally, a special mixture of nutrients will be added and mixed into the soil. The soil will then be covered with two layers of 6 mil plastic sheeting so as to minimize hydrocarbon volatilization and prevent the infiltration of rain water into the soils.

*SOIL TREATMENT AND SAMPLING*

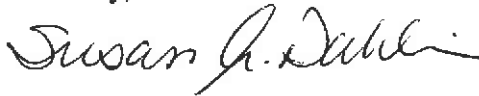
The soil will be uncovered and turned weekly using a "bobcat" type mini tractor. Additionally, moisture conditions will be checked and water added as necessary. A four part composite soil sample will be collected every three months for analysis of TPH-as-diesel by the DOHS-LUFT methodology until the soil reaches the cleanup objective of less than 100 ppm TPH. Soil treatment is anticipated to extend six months from project initialization.

*REPORTING*

Following successful completion of soil bioremediation, a final report will be prepared which details work conducted and contains the results of laboratory analysis of soil samples.

If you have any questions or require more information, please call myself at (510) 862-4345 or Paul Horton of SEACOR at (510) 686-9780.

Sincerely,



Susan A. Dahlin  
Environmental Programs Engineer

**TABLE 1**  
**TPH (DIESEL) Concentration**  
**"300 Area" GE-VNC**

SAMPLE NUMBER	SAMPLE DATE	EPA METHOD	REPORTING LIMIT (ppm)	TPH (diesel) (ppm)	DESCRIPTION
DS-1	1/30/92	3550	1	61	DRUM NO. DS-1
DS-2	1/30/92	3550	1	160	DRUM NO. DS-2
DS-3	1/30/92	3550	1	450	DRUM NO. DS-3
DS-4	1/30/92	3550	1	710	DRUM NO. DS-4
DS-5	1/30/92	3550	1	210	DRUM NO. DS-5
DS-6	1/30/92	3550	1	170	DRUM NO. DS-6
DS-7	1/30/92	3550	1	430	DRUM NO. DS-7
DS-8	1/30/92	3550	1	250	DRUM NO. DS-8
DS-9	1/30/92	3550	1	560	DRUM NO. DS-9
DS-10	1/30/92	3550	1	210	DRUM NO. DS-10
DS-11	1/30/92	3550	1	130	DRUM NO. DS-11
DS-12	1/30/92	3550	1	760	DRUM NO. DS-12
DS-13	1/30/92	3550	1	360	DRUM NO. DS-13
DS-14	1/30/92	3550	1	720	DRUM NO. DS-14
DS-15	1/30/92	3550	1	480	DRUM NO. DS-15
DS-16	1/30/92	3550	1	490	DRUM NO. DS-16
DS-17	1/30/92	3550	1	430	DRUM NO. DS-17
DS-18	1/30/92	3550	1	250	DRUM NO. DS-18
DS-19	1/30/92	3550	1	250	DRUM NO. DS-19
C-1	1/30/92	3550	1	750	composite 8 drums
C-2	1/30/92	3550	1	900	composite 8 drums
C-3	1/30/92	3550	1	13000	composite 8 drums
RTS-1	1/30/92	3550	1	ND	trench floor
RTS-3	1/30/92	3550	1	ND	trench floor

white -env.health  
 yellow -facility  
 pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200  
 Oakland, CA 94621  
 (415) 271-4320

Hazardous Materials Division Inspection Form

Site ID# \_\_\_\_\_ Site Name General Electric Co Today's Date 10/31/91  
 Site Address 6705 Vallecitos Rd EPA ID# \_\_\_\_\_  
 City Pleasanton Zip 94566 Phone 862-4345

MAX Amt. Stored > 500lbs/55g/200cf?  Y  N  
 Hazardous Waste generated per month? \_\_\_\_\_

- Inspection Categories:**  
 I. Haz Mat/Waste GENERATOR/TRANSPORTER  
 II. Business Plans, Acute Hazardous Materials  
 III. Underground Tanks

The marked items represent violations of the Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

LA GENERATOR (Title 22)

- |                   |                             |         |
|-------------------|-----------------------------|---------|
| Manifest          | 1. Waste ID                 | 66471   |
|                   | 2. EPA ID                   | 66472   |
|                   | 3. > 90 days                | 66508   |
|                   | 4. Label dates              | 66508   |
|                   | 5. Biennial                 | 66493   |
|                   | 6. Records                  | 66492   |
|                   | 7. Correct                  | 66484   |
|                   | 8. Copy sent                | 66492   |
|                   | 9. Exception                | 66484   |
|                   | 10. Copies Rec'd            | 66492   |
| Misc.             | 11. Treatment               | 66371   |
|                   | 12. On-site Disp. (H.S.&C.) | 26189.5 |
|                   | 13. Ex Haz. Waste           | 66570   |
| Prevention        | 14. Communications          | 67121   |
|                   | 15. Aisle Space             | 67124   |
|                   | 16. Local Authority         | 67126   |
|                   | 17. Maintenance             | 67120   |
|                   | 18. Training                | 67105   |
| Genlin. gency     | 19. Prepared                | 67140   |
|                   | 20. Name List               | 67141   |
|                   | 21. Copies                  | 67141   |
|                   | 22. Emg. Coord. Imp.        | 67144   |
| Containers, Tanks | 23. Condition               | 67241   |
|                   | 24. Compatibility           | 67242   |
|                   | 25. Maintenance             | 67243   |
|                   | 26. Inspection              | 67244   |
|                   | 27. Buffer Zone             | 67246   |
|                   | 28. Tank Inspection         | 67259   |
|                   | 29. Containment             | 67245   |
|                   | 30. Safe Storage            | 67261   |
|                   | 31. Freeboard               | 67257   |

Comments:

About 60 feet of pipe attached to an above ground diesel tank (10000 gal) was removed. The tank still has some diesel left. The pipes were about ~~100~~ <sup>50</sup> feet below grade.

The site safety plan was reviewed before any work was performed.

Already 37 (55 gal) drums of excavated soil in on site awaiting for analysis and disposal.

Three soil samples (1 feet below the pipe line) were taken and will be analyzed for BTXE, TPH(D) and one sample under the pump will be analyzed for PCB.

Please send lab reports to this office.

LB TRANSPORTER (Title 22)

- |          |                           |       |
|----------|---------------------------|-------|
| Manifest | 32. Applic./insurance     | 66428 |
|          | 33. Comp. Cert./CHP Insp. | 66448 |
|          | 34. Container             | 66465 |
|          | 35. Vehicles              | 66465 |
|          | 36. EPA ID #s             | 66531 |
|          | 37. Correct               | 66541 |
|          | 38. HW Delivery           | 66543 |
|          | 39. Records               | 66544 |
| Cont'rs  | 40. Name/ Covers          | 66545 |
|          | 41. Recyclables           | 66800 |

Rev 6/88

Contact: Susan A. DeLillo  
 Title: Environmental Programs Engineer  
 Signature: Susan A. DeLillo

Inspector: R. Anderson  
 Signature: Ravi