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> January 18, 1993 1118rhie 61078.02

Mr. Richard Hiett Regional Water Quality Control Board San Francisco Bay Region 2101 Webster Street, Suite 500 Oakland, California 94612

Subject:

Remediation Schedules for ARCO Sites in Alameda County, California.

Dear Mr. Hiett:

On behalf of ARCO Products Company (ARCO), RESNA has prepared these estimated schedules for remediation of sites under your regulatory oversight. These include ARCO Stations 276, 374, 2107, 2185, 4494 and 6148 in Oakland, California, ARCO Station 2035 in Albany, California, ARCO Station 2152 in Castro Valley, California, and ARCO Station 6041 in Dublin, California.

The darkened lines on the schedules represent deadlines which were agreed upon during the September 30, 1992 meeting at the Alameda County Health Care Services Agency (ACHCSA). The hatchered lines represent our best guess estimates of times which may be required to complete tasks should unforeseen delays occur. These unforeseen delays include permitting issues, offsite access issues, and estimated times of operation of the respective remediation systems.

If you have any questions or comments, please contact us at (408) 264-7723 or Mr. Michael Whelan of ARCO at (415) 571-2449.

Sincerely,

RESNA Industries Inc.

cc:

ACHCSA

Mr. Michael Whelan, ARCO

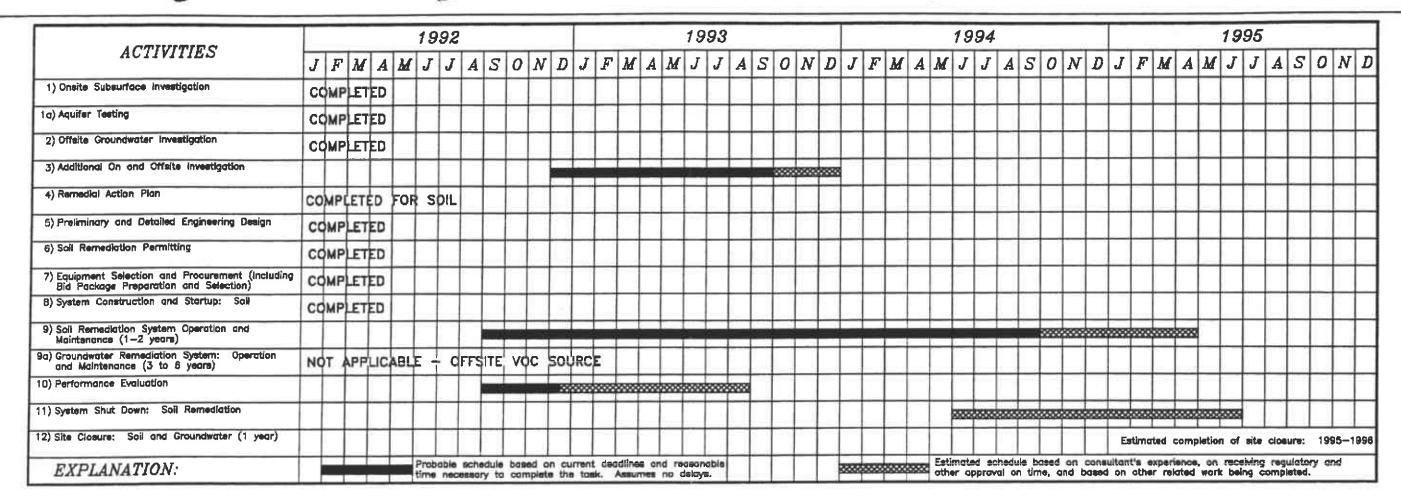
Mr. John Meck, ARCO legal

Mr. Chris Winsor, ARCO

Mr. Mark Thomson, Alameda County D.A. (Cover Letter)

Joel Coffman

Project Manager



1 and 1a) Oneite Subsurface Investigation:
Initial Oneite Assessment Report and aquifer test completed.

2) Offsite Groundwater Investigation: Initial offsite investigation completed. VOCs found in affsite, upgradient (from ARCO site) monitoring well acreened in deeper water-bearing zone. Report due to ACHCSA by February 1, 1993. Report will include results of additional onsite and affaits well installations and vapor extraction performance test of existing onsite vapor extraction system.

3) Additional On and Offsite investigation:

Additional offsite vapor extraction wells (one phase additional vapor extraction well installations) to be added for use in existing vapor extraction system at

site upon gaining offsite access.

Offsite investigation of deeper water-bearing zone to be conducted by another party since deeper agulfer is impacted by VOCs from an apparent offsite source.

 *) Remedial Action Plan:
 * RAP was approved by ACHCSA.
 ** Groundwater treatment addressed in RAP is on hold (discussed in meeting at ACHCSA on September 30, 1992) due to the deeper water-bearing zone being the apparent responsibility of another party. Shallow water-bearing zone does not sustain viable pumping rate; the shallow water-bearing zone is expected to be remediated by vapor extraction.

5) Preliminary and Detailed Engineering Design:
* Existing vapor extraction system at site is operational and being used to remediate shallow water-bearing zone impacted by gasoline hydrocarbons. Design of groundwater remediation system for deeper water-bearing zone is not applicable due to an apparent offsite source of VOCs.

 Soil Remediation Permitting:
 No design changes have necessitated additional permitting, including modification of existing treatment system.

Permitting complete.

7) Equipment Selection and Procurement:

Equipment onsite and operational, may be added to for system expansion as

8) System Construction and Startup (Soil and Groundwater); Interim soil remediation system operational, groundwater remediation system not applicable due to deeper water—bearing zone impacted by an apparent. offsite VOC source.

9 and 9a) System Operation and Maintenance;

- It is anticipated that soil and shallow water-bearing zone can be remediated
- Assumes that it is technically feasible to achieve cleanup levels.
- Assumes no significant equipment breakdowns or design changes within system. Groundwater system not applicable due to offsite VOC source.

10) Performance Evaluation:

- Evaluation shows that system will effectively remove gasoline hydrocarbons from soil and groundwater (shallow water-bearing zone) and will reduce con-centrations significantly over time.

 Evaluation shows that additional vapor extraction wells (other than ones from
- #3 above) are not required to effectively remediate impacted greas.

11) Shut Down of Soil Remediation System:
* Anticipate system shut down by September 1994. May go longer pending results of additional offsite vapor extraction well installations.

12) Site Closure:

- Requirements for soil closurs involve only drilling of confirmation borings and performance evaluation at time of system shutoff.
- Requirements for groundwater closure involves only groundwater in shallow water-bearing zone at site as there is an apparent offsite VOC source.

 Closure dependent on agency concurrence within 1 year following completion

Note: Obtaining nondetect levels in groundwater and "low-level" cleanup levels in soil may not be technically feasible.



ESTIMATED SOIL AND GROUNDWATER REMEDIATION IMPLEMENTATION SCHEDULE

10800 MacArthur Boulevard Oskland, California

ARCO Station 276

PLATE

PROJECT

61078.02

REVISION: 2 DATE: 12/10/92