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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:

Ms. Susan Hugo, ACHCSA

Mr. Michael Whelan, ARCO

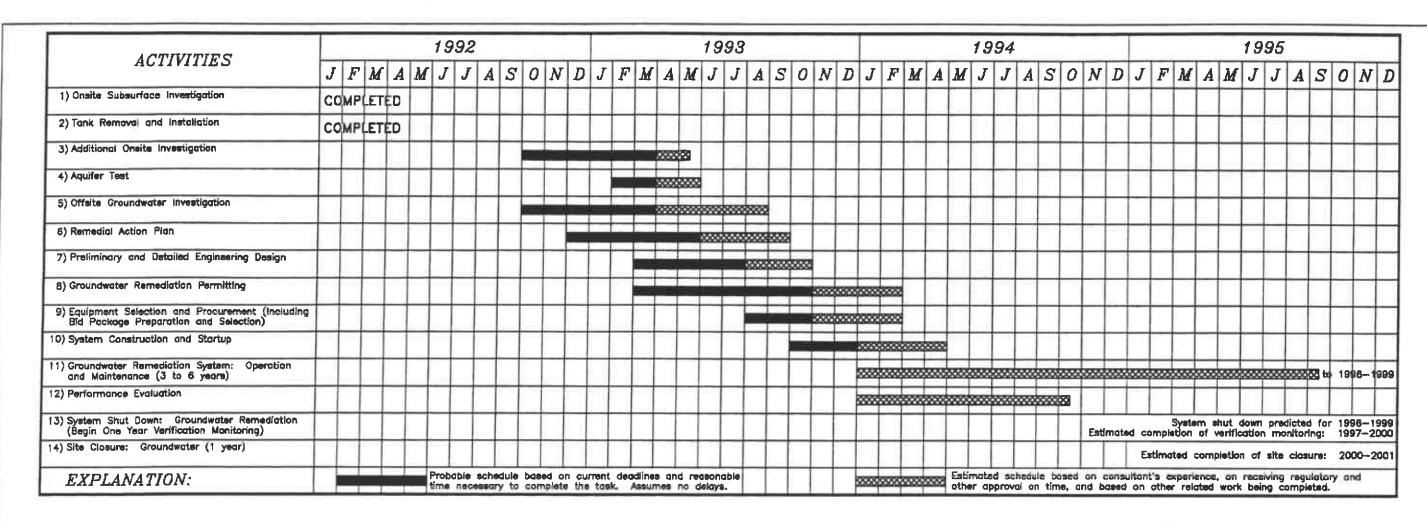
Mr. John Meck, ARCO legal

Mr. Chris Winsor, ARCO

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

Joel Coffman

Project Manager



1) Onsite Subsurface Investigation:
* Fleid work was delayed (approximately 3 months) due to problems related to took replacement activities.

Completed, report submitted in September 1992.

2) Tank Removal and Installation:

Completed, tank clasure report issued in 1992.

3. 4. and 5) Additional Onsite and Offsite investigation and Aquifer Test: Work plan for additional work at the site (including additional onsite wells, offsite well, and aquifer test) submitted to ACHCSA and RWQCB on December 1, 1992.

Gaining offsite access and encroachment permitting with City of Oakland and CalTrans may delay installation of offsite well(s).

6) Remedial Action Plan:
*Completion of offsite investigation will no affect remediation schedule.

* RAP due to ACHCSA by June 1, 1993.

7) Preliminary and Detailed Engineering Design: *Assumes no RAP revisions are necessary.

Assumes no changes to design after regulatory comments. Design completed by August 1, 1993.

8) Groundwater Remediation Permitting:

Assumes no changes to design after regulatory comments, including modification of treatment system.

- Also assumes no special regulatory agency, city committee, or other entity
- places special permitting requirements on this project.

 Assumptions concerning groundwater remediation are being made prior to performance of aquifer test at site. Therefore, schedule pertaining to ground water remediation may not reflect actual conditions and circumstances.

Permitting completed by November 1, 1993.

9) Equipment Selection and Procurement:

Assumes all equipment is available from stock and can be obtained within 4 to 6 weeks.

Selected equipment approved by ACHCSA.

Elds will be evaluated and contract will be awarded by September 1, 1993.

Equipment will be received by November 1, 1993.

10) System Construction and Startup:

Assumes no delays due to weather. Assumes no delays due to negotiation with property owners.

Assumes no delays due to other contractors performing work onsite.

Assumes no delays due to utility installation.

Assumes no delays due to special permitting requirements.

Construction to begin by November 1, 1993. System startup to begin by January 1, 1994.

11) Groundwater Remediation System Operation and Maintenance:

It is anticipated that groundwater remediation can be completed within 3 to 6 years.

- * Assumes that it is technically feasible to achieve cleanup levels. * Assumes no offsite remediation will be necessary.
- Assumes no significant equipment breakdowns.

- 12) Performance Evaluation: Evaluation shows that system will effectively remove hydrocarbons from soil and groundwater impacted areas and will reduce concentrations significantly
- Evaluation shows that additional vapor and groundwater extraction wells are not required to effectively remediate impacted areas once the treatment system is operational.
- Performance evaluation to be completed by July to September 1994.

- 13) Shut Down of Groundwater Remediation System;
 *Cleanup will be completed approximately 3 to 6 years after startup.
- Only one year of verification groundwater monitoring will be required before site closure can be initiated.
- Groundwater remediation system expected to be shut down sometime in 1997

14) Site Closure: Groundwater;

- Requirements for groundwater closure involve only groundwater monitoring and performance evaluation at system shutoff.
- Clasure dependent on agency concurrence within 1 year following completion of verification monitoring.

Assumes no risk assessment will be necessary



ESTIMATED SOIL AND GROUNDWATER REMEDIATION IMPLEMENTATION SCHEDULE ARCO Station 2185

PLATE

PROJECT

61078.02

REVISION: 2 DATE: 12/10/92

9800 East 14th Street Oakland, California

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