EXPLANATION TO ARCO 608 REMEDIATION SCHEDULE

o On-Site Investigation

The on-site investigation was completed in 1989 and a report submitted in October 1989.

o Aquifer Test (On-Site)

The on-site aquifer test was completed in 1989 and a report submitted in April 1990.

o Remedial Action Plan (On-Site)

A remedial action plan was completed in 1990 and submitted for on-site remediation in February 1991.

o Engineering Design (On-Site)

An engineering design for the groundwater remediation system was completed by April 1991.

o Permitting (On-Site)

All required discharge and building permits for on-site remediation were obtained by June 1991.

o Equipment Selection and Procurement (On-Site)

All required equipment for on-site groundwater remediation was procured by September 1991.

o System Construction and Start-Up (On-Site)

The on-site groundwater remediation system was completed and activated in October 1991.

o Off-Site Investigation

Definition of the off-site hydrocarbon plume was completed in October 1991 and a report submitted in December 1991.

1. Operation and Maintenance of the Groundwater Treatment System

Operation and Maintenance consists of operating and maintaining the on-site and off-site groundwater remediation equipment, adjustments to the groundwater extraction system and performing the required sampling and analysis for the treatment system discharge permit. Additionally, monthly groundwater elevation data will be collected for analysis to optimize the efficiencies of the extraction system. Until start-up of the off-site remediation system, operation and maintenance will consist of only on-site treatment system work.

The schedule assumes that: (1) groundwater remediation will be completed in 7 to 9.5 years, (2) it is technically feasible to achieve clean-up levels, (3) there will be no significant equipment breakdowns, and (4) off-site encroachment is readily obtainable.

This schedule is based upon presently available hydrogeologic data and the use of the best available technology. The progress and expected duration of the groundwater remediation is dependent on physical and chemical factors such as: fluctuating groundwater levels both natural and/or artificially induced (pumping of other wells near the site), and the correlation of data from specific points (wells and borings) with the actual conditions across the site. Additionally, variations in site geology and transmissivity of the aquifer may have an affect on the groundwater remediation schedule. The duration of the clean-up can be more accurately predicted following the performance of quarterly performance evaluations with both the off-site and on-site remedial systems operating.

2. Performance Evaluation

Quarterly performance evaluations will review analytical data and system performance to determine the success of the groundwater treatment system. The evaluations will help determine the need, if any, for additional extraction wells to maintain the desired removal capability or additional techniques to further expedite the remediation of the site. Until the off-site system becomes operational, the performance evaluations will only address the on-site remediation system's performance. After the installation of the off-site remediation system, quarterly performance evaluations will include all groundwater remediation activities for the site.

The schedule assumes that: (1) the performance evaluation shows no major modifications to the existing system will be required and (2) if further wells or modifications are required, installation will not incur major time delays.

3. Remedial Investigation and Feasibility Study (Off-Site)

A Remedial Investigation and Feasibility Study will be performed to determine the best method for the remediation of the off-site hydrocarbon plume. The study will evaluate different technologies and methods, and determine the most effective manner to remediate the off-site hydrocarbon plume. Additionally, the study will evaluate the best possible location for the off-site treatment system, if necessary.

The schedule assumes that: (1) the feasibility study will be approved within 30 days.

4. Remedial Work Plan (Off-Site)

A Remedial Work Plan for the remediation of the off-site hydrocarbon plume will be prepared and submitted for regulatory approval. The Remedial Work Plan will describe the proposed groundwater remediation system, including the preliminary design, installation, and operation and maintenance. Also, a preliminary work schedule including a construction schedule will be presented.

The schedule assumes that: (1) after submittal, the Work Plan will approved within 30 days and (2) there will be no major design changes after regulatory review.

5. Engineering Design (Off-Site)

Preliminary design will be completed with the submittal of the Remedial Work Plan. Preliminary design consists of analyzing site characterization data collected to date and developing a cost-effective conceptual design. The conceptual design consists of specifying the proposed groundwater extraction system, the type of treatment system, the treatment system location, and the development of a system process flow diagram.

After the Remedial Work Plan has been approved, work will begin on completing the engineering design. This portion of the design will include engineering calculations, preparation of construction drawings, which includes treatment system layout, treatment pad layout, trench and section details, a process and instrumentation diagram, and a one line electrical diagram, and plan review by ARCO. After plans and specifications are finalized bids will be solicited from qualified contractors.

6. Encroachment and Permitting (Off-Site)

The majority of the permitting and encroachment for the off-site remediation system will involve the installation of off-site treatment equipment and the possibility of an additional treatment area. The required permitting would include building permits and possibly an additional sanitary or a NPDES permit. Currently, a permit for discharge to the sanitary sewer exists for the on-site treatment system. The on-site discharge permit was approved for flow rates which could accommodate off-site treatment water, but an additional permit may be required if an additional point of discharge is needed. The sanitary discharge permit may be replaced with a NPDES permit at a later date. Encroachment permission would be required for the installation of an off-site treatment system. This would include the treatment area, as well as piping and extraction wells. The schedule assumes that all required permits and encroachment could be obtained within 7 months.

7. Equipment Selection and Procurement

After engineering design is complete, a bid package will be submitted to environmental construction contractors (a minimum of three). After evaluating contractor bids a contractor will be selected by ARCO and a construction contract negotiated and signed. Engineering will also submit to ARCO an equipment list for the design. ARCO orders directly certain remediation equipment. The schedule assumes that all negotiations and equipment procurement will be complete within 4.5 months.

8. Construction and Start-up (Off-Site)

After obtaining all necessary permits and encroachment permission. The selected contractor will begin construction of the remedial system in accordance with the approved plans and specifications. System installation will include installation of utility trenches, treatment pad construction, pressure testing of all groundwater piping, and county inspection of all permit required installations.

The schedule assumes that there will be no significant delays due to inclimate weather.

After completion of the treatment system installation, start-up of the treatment system will be initiated in compliance with all applicable regulatory agencies. Start-up of the system will include system control-logic shakedown, extraction well adjustments, and the collecting of all required influent and effluent samples.

9. System Shutdown

Shutdown will occur when groundwater analytical data from impacted wells show that hydrocarbon concentrations have been reduced below agency prescribed clean-up levels and after agency concurrence. Based on current regulations, the groundwater must be monitored for a minimum of one year to verify clean-up, prior to applying for site closure.

The schedule assumes that: (1) clean-up will be complete within 7 to 9.5 years and (2) only 1 year of groundwater verification monitoring will be required.

10. Site Closure

Site closure is typically granted after an extensive RWQCB review of all historical data for the site. Verification monitoring will be included in this historical review.

The schedule assumes that: (1) agency clean-up goals are obtainable, (2) requirements for groundwater closure involves only groundwater verification monitoring and a performance evaluation, and (3) regulatory approval of verification monitoring results.

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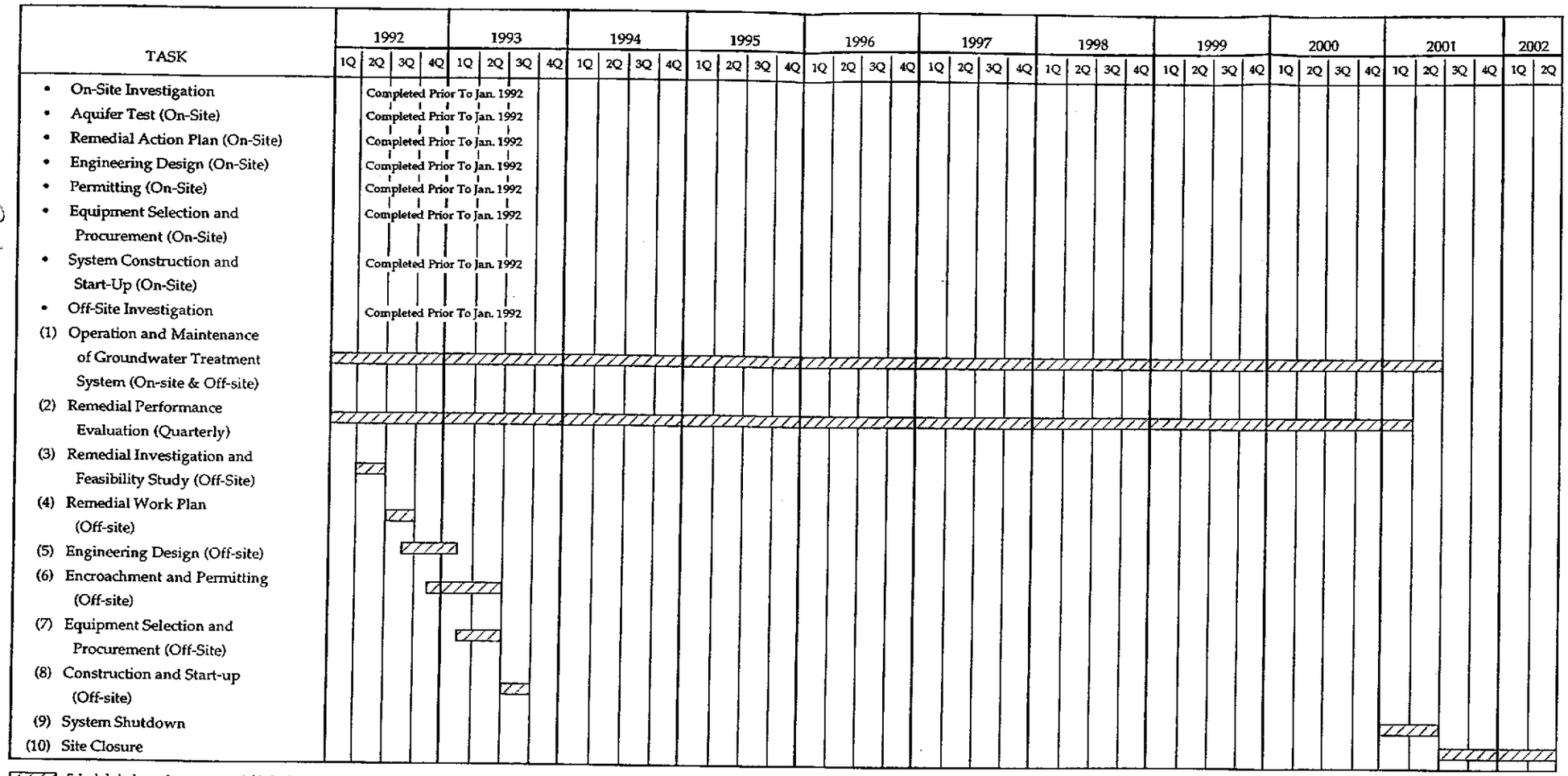
ESTIMATED GROUNDWATER REMEDIATION SCHEDULE

ARCO SERVICE STATION # 608

San Lorenzo, California



Schedule is dependent upon available hydrogeologic information and best available remedial technology.

LEGEND

NOTES:

(1) Operation and Maintenance of Groundwater Treatment System Assumptions:
- Groundwater remediation will take 7 to 9.5 years.
- It is technically feasible to obtain clean-up levels.
- No significant equipment breakdowns.
- Off-site encroachment is readily obtainable.
- Off-site operation will begin in 4th quarter 1993.

(2) Remedial Performance Evaluation Assumptions:
- Performance evaluations will show that no major modifications to the existing system will be required.

(3) Remedial Investigation and Feasibility Study Assumptions:
- Feasibility study will be approved within 30 days.

(4) Remedial Work Plan Assumptions:
- Work Plan will be approved within 30 days.
- No major design changes after regulatory review.

(5) Engineering Design Assumptions:
- Encroachment and permitting is obtainable for the off-site system.

(6) Encroachment and Permitting Assumptions:
- All required permitting and encroachment can be obtained within 7 months

(7) Equipment Selection and Procurement Assumptions:
- Equipment is available and can be delivered within 4.5 months.

(8) Construction and Start-up Assumptions:
- No delays due to inclimate weather

(9) System Shutdown Assumptions:
- Clean-up will be complete within 7 to 9.5 years.
- Only one year of groundwater verification monitoring will be required.

(10) Site Closure Assumptions:
- Clean-up goals are obtainable.
- Requirements for groundwater closure involve only groundwater monitoring and performance evaluation.
- Regulatory approval of verification monitoring results.