

ALAMEDA COUNTY
HEALTH CARE SERVICES

Carl Lester

AGENCY

Agency Director



470-27th Street, Third Floor
Oakland, California 94612

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UG TANKS*

January 7, 1986

Aqua Terra Technologies, Inc.
3490 Buskirk Avenue, Suite A
Pleasant Hill, California 94523

Attention: Lori A. Pettegrew, Project Engineer

Dear Ms. Pettegrew:

Please accept my deepest apologies for such a delay in responding to your request pertaining to monitoring facilities and tank enclosure for American Can Company at 3801 East Eighth Street, Oakland, California.

I have read through your proposal for the second time and find that it is quite acceptable to this Agency and, therefore, recommend your procedure to carry out the proposal as recommended in this correspondence and report.

I must again commend you on your patience and being so tolerant of my delay in getting this information to you. Hopefully, in the future our dealings will be more current and that I will be more responsive.

Sincerely,

T. M. Gerow, Public Health Engineer
Underground Storage Tank Program
Division of Environmental Health

TMG/cdb

November 25, 1985



Mr. Ted Gerow
County of Alameda
Division of Environmental Health
470 - 27th Street, Room #324
Oakland, CA 94612

Subject: Monitoring Facilities and Underground Storage
Tank Closure

Dear Mr. Gerow:

Enclosed please find our proposal plan for the installation of monitoring facilities for a group of six tanks and for closure of two separately located tanks.

As I discussed with you on Thursday, November 14, 1985, I have also included copies of the Hazardous Substances Storage Statements for your review. Aqua Terra Technologies will not begin work until the County of Alameda approves the proposed plan.

If you have any questions regarding this proposal or wish to discuss these matters in greater detail, please contact us.

Sincerely,

AQUA TERRA TECHNOLOGIES, INC.

A handwritten signature in cursive script that reads "Lori A. Pettegrew".

Lori A. Pettegrew
Project Engineer

A handwritten signature in cursive script that reads "R. Wane Schneider".

R. Wane Schneider, Ph.D.
CE 38735
Project Manager

LAP/RWS:km
Enclosures

cc: Mr. Don Bergeson
American Can Company
3801 East Eighth Street
Oakland, CA 94601

RECEIVED

DEC 3 - 1985

ENVIRONMENTAL HEALTH
ADMINISTRATION

November 25, 1985



County of Alameda
Division of Environmental Health
470 - 27th Street, Room #324
Oakland, CA 94612

Attention: Mr. Ted Gerow

Monitoring Facilities and Tank Closure

**American Can Company
3801 East Eighth Street
Oakland, CA 94601**

Aqua Terra Technologies has been retained by American Can Company, 3801 East Eighth Street, Oakland to assist in the installation of groundwater monitoring wells for a group of six underground tanks and closure of two separately located underground tanks.

PROPOSED WORK

We propose that the work necessary to provide underground tank monitoring facilities and closure of two separately located tanks be performed in two phases. Phase I will consist of installing underground storage tank monitoring facilities for a group of six underground tanks. Phase II will consist of closing two separately located tanks.

This work is to be performed to comply with Alameda County Water District (ACWD) Groundwater Monitoring Guidelines and State Water Resources Control Board (SWRCB) guidelines for implementation of AB 1362 (SHER) for underground storage tank monitoring.

Phase I - Underground Storage Tank Monitoring Facilities

The following specific tasks are proposed for installing the monitoring system.

Task 1 - Groundwater Monitoring Well Installation

As required by the SWRCB guidelines, we propose that four groundwater monitoring wells be installed for the six tank group. The monitoring wells will be positioned around the tanks in accordance with our knowledge of the area geohydrology.

The ACWD guidelines for hazardous materials storage require groundwater monitoring wells for underground tank installations where groundwater occurs between 20 and 45 feet from the ground surface. Where groundwater exists above 20 feet, groundwater monitoring wells only are required. Likewise,

Monitoring Facilities and Tank Closure
November 25, 1985
Page 2

the SWRCB guidelines for AB 1362 compliance require both groundwater and vadose monitoring wells for underground tank installations where groundwater exists at depths less than 50 feet below the ground surface.

However, based on our knowledge of west Oakland soil and groundwater conditions, we have assumed that groundwater will be encountered at from 10 to 15 feet below the ground surface. Furthermore, it is likely that the upper, unconfined, groundwater aquifer is of generally poor quality unsuitable for domestic, agricultural, or industrial uses. Under these conditions, both the ACWD and SWRCB guidelines consider installations of groundwater monitoring wells, exclusive of vadose monitoring wells, appropriate for underground tank monitoring. Therefore, this proposal addresses installation of a groundwater monitoring system for underground tank monitoring.

Each monitoring well will consist of machine slotted (0.025 inch slots), two inch diameter, schedule 40 PVC well screen extending approximately five feet above and 20 feet below the groundwater table. In the unsaturated zone, a solid PVC, schedule 40, casing will be installed. The casing sections will be connected with threaded flush joints; no PVC cement will be used. The annular space surrounding the well screen will be backfilled with clean sand to approximately 12 inches above the top of the slotted section. A 12 inch thick bentonite seal will be placed above the sand pack. The well casing above the bentonite seal will be backfilled with a cement/bentonite grout. The upper 12 inches of solid casing will be backfilled with concrete.

Each well head will be fitted with a water tight, locking, cap. The top of all wells will be placed below grade in an approximately 12-inch diameter, cast iron, manhole. The manholes will be placed slightly above surrounding grade to limit surface water infiltration. Concrete around the manholes will be sloped away from the well.

The monitoring wells will be developed by pumping to clean and stabilize the sand pack around the slotted section. We anticipate removing, during development, a volume of water equivalent to approximately five well casings. The well will continue to be developed until the groundwater flows freely into the well and the discharge water is free of noticeable turbidity.

The monitoring wells will be constructed under the supervision of our engineering geologist. Our engineering geologist

Monitoring Facilities and Tank Closure
November 25, 1985
Page 3

will obtain undisturbed samples of the soils encountered and prepare detailed logs of each boring.

Samples will be obtained at three to five foot intervals, beginning at five to six feet below the ground surface, in all test borings, resulting in approximately four samples per boring for a total of 16 soil samples. The soil samples will be obtained in 2.5-inch diameter brass liners with a Modified California Drive Sampler. Samples will be retained in the brass liners and capped, with Teflon sheeting placed between the caps and the soil sample. Following development of each well, groundwater samples will be collected for analysis.

The soil and groundwater samples, soil sample tubes, and boring augers will be steam cleaned prior to their initial use. In addition, the samplers and augers will be steam cleaned between each subsequent use to reduce the likelihood of cross contamination between samples and/or test borings.

Soil cuttings will be wrapped in plastic sheeting and groundwater removed from the wells during development will be pumped to a tank and held at the site. The cuttings and groundwater will be retained at the site until sample analytical data has been reviewed. If the soil cuttings and groundwater are not contaminated, there will be no restrictions on their disposal. However, if the cuttings and groundwater are contaminated, they may require disposal at a Class I disposal facility. If necessary, Aqua Terra will coordinate the temporary storage, the transportation, and the disposal of the contaminated wastes.

Task 2 - Soil and Groundwater Sample Analysis

Soil and groundwater samples collected during the construction of the monitoring wells will be transported by Aqua Terra personnel to a certified analytical laboratory for analysis. Appropriate chain of custody forms as required by the California Department of Health Services (DHS) will be used by Aqua Terra.

Soil samples collected at common depths from borings at the six tank group will be composited. This reduces the number of soil sample analyses required to four. Sample compositing will be performed at the analytical laboratory just prior to analysis. Soil samples will be analyzed for aromatic organic compounds according to EPA Method 8020 by gas chromatography (GC). One groundwater sample will be analyzed for purgeable organic compounds according to

Monitoring Facilities and Tank Closure
November 25, 1985
Page 4

EPA Method 624 by gas chromatography/mass spectrometry (GC/MS). Groundwater from the remaining five wells will be analyzed for organic compounds (EPA Method 602).

Task 3 - Report Preparation

Upon completion of Tasks 1 and 2, a report summarizing the results of the monitoring system installation will be submitted to the appropriate State and local agencies. Boring logs, analytical data, and a site map illustrating the well locations will be included.

Phase II - Underground Storage Tank Closure

The following specific tasks are proposed for closure of the two separately located tanks.

Task 1 - Drill Test Boring and Analyze Samples

One test boring will be drilled in the immediate vicinity of each of the two tanks to determine if a substantial prior release of material stored in the tanks has occurred. The test borings will be drilled to five feet below the groundwater table which we judge to be approximately 15 feet below existing grade.

Our field engineer will obtain samples of the soils encountered and prepare a detailed log of the borings. One groundwater sample will be collected from each bore hole. Drilling operations will be conducted in accordance with appropriate protocol for sites potentially involving hazardous wastes as described in Phase I.

One soil sample collected from the boring at a depth just above the water table and one groundwater sample from each boring will be analyzed for compounds historically stored in the tanks. Following collection of the samples, the bore holes will be backfilled with a cement/bentonite grout. Sample analyses will be performed by a State certified analytical laboratory.

Upon receipt of sample analytical results, a brief letter report will be submitted to the Alameda County Health Department stating the analytical data results.

Task 2 - Prepare Closure Specification and Plan

Assuming that no significant prior leakage has occurred, Aqua Terra will prepare a general specification to be followed

Monitoring Facilities and Tank Closure
November 25, 1985
Page 5

by a contractor for closure of the tanks. The specification will address the dimensions of the excavations, disposal of the excavated tanks and contents, backfill of the excavations, and resurfacing of the site. The specification will represent the Closure Plan.

Aqua Terra will prepare the Closure Plan for submittal to the Alameda County Health Department for approval prior to initiating excavation action.

Task 3 - Inspect Closure Construction

Aqua Terra will provide construction inspection services during closure of the underground tanks. Our engineer will observe closure construction activities to confirm that the conditions of the closure specification are satisfied.

A brief report describing the final closure procedures which were followed will be prepared and submitted to the appropriate regulatory agencies.