

LOP - RECORD CHANGE REQUEST FORM

printed:
03/20/96

Mark Out What Needs Changing and Hand to LOP Data Entry
(Name/Address changes go to Annual Programs Data Entry)

Insp: JMS

AGENCY # : 10000 SOURCE OF FUNDS: F SUBSTANCE: 8006619
 StID : 3564 LOC:
 SITE NAME: Alameda Golf Course DATE REPORTED : 08/16/91
 ADDRESS : 1 Clubhouse Mem Rd DATE CONFIRMED: 08/16/91
 CITY/ZIP : Alameda 94501 MULTIPLE RPs : N

SITE STATUS

CASE TYPE: G CONTRACT STATUS: 4 PRIOR CODE:2A4 EMERGENCY RESP:
 RP SEARCH: S DATE COMPLETED: 11/21/91
 PRELIMINARY ASMNT: U DATE UNDERWAY: 08/31/92 DATE COMPLETED: 05/03/95
 REM INVESTIGATION: DATE UNDERWAY: DATE COMPLETED:
 REMEDIAL ACTION: DATE UNDERWAY: DATE COMPLETED:
 POST REMED ACT MON: DATE UNDERWAY: DATE COMPLETED:

ENFORCEMENT ACTION TYPE: 1 DATE ENFORCEMENT ACTION TAKEN: 11/21/91
 LUFT FIELD MANUAL CONSID: 3HSCAWG
 CASE CLOSED: Y DATE CASE CLOSED: 03/21/96
 DATE EXCAVATION STARTED : 07/10/91 REMEDIAL ACTIONS TAKEN: ET

RESPONSIBLE PARTY INFORMATION

RP#1-CONTACT NAME: Robert Wonder, asst.
 COMPANY NAME: City of Alameda
 ADDRESS: 2263 Santa Clara, Rm.301
 CITY/STATE: Alameda CA 94501

INSPECTOR VERIFICATION:

NAME _____ SIGNATURE _____ DATE _____

DATA ENTRY INPUT:

Name/Address Changes Only			Case Progress Changes	
ANNPGMS _____	LOP _____	DATE _____	LOP _____	DATE _____

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH

1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

StID 3564

September 13, 1995

Mr. Fred Framsted
City of Alameda, Rec and Park
City Hall, Room 201
Alameda, CA 94501

RE: Well Decommission at 1 Memorial Clubhouse Dr, Alameda, CA

Dear Mr. Framsted:

This office and the S.F. RWQCB have reviewed the case closure summary for the above referenced site and concur that no further action related to the underground tank release is required at this time. Before a remedial action completion letter is sent, the onsite monitoring wells (MW-1, 2, and 3) should be decommissioned, if they will no longer be monitored. Please notify this office upon completion of well destruction so a closure letter can be issued.

If you have any questions, I can be reached at (510) 567-6762.

Sincerely,

eva chu
Hazardous Materials Specialist

cc: files

August 1, 1995

ENVIRONMENTAL
PROTECTION

95 AUG -2 PM 2:58



Thomas F. Peacock, Supervising HMS
Hazardous Material Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Dear Mr. Peacock:

In response to your letter to the City Manager regarding a
underground gas tank at the Alameda Golf Complex, I'm pleased to
inform you that two underground storage tanks (USTs) were removed
July 10, 1991. These tanks were removed by Zaccor Corporation
under the supervision of the Alameda County Office of Environment
Health Department, Hazardous Materials Division. The excavation
and stockpiling of contaminated soils was performed the same day by
Zaccor Corporation, and this soil was found without detectable
concentrations of contaminants.

On June 29, 1995, Environmental Technical Services was retained to
sample the stockpile soil removed and stored during the excavation
of the above mentioned gas tanks and all three samples showed no
tract of any contamination. Copies of this report have been sent
to:

Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621
Attention: Ms. Eva Chu

and

San Francisco Regional Water Quality Control Board
2101 Webster Street, Room 500
Oakland, CA 94621

*9/7/95 -
sent to old address
wait another week to
see if P.O. ~~can~~ forwards
rpt.*

I believe the City of Alameda has successfully completed all of the
necessary requirements for the removal of its underground gas tanks
and I would like to request that this be listed as complete in your
future listings of UGT cleanup sites.

If you have any questions, please call me at 748-4653.

Very truly yours,
Fred C. Framsted

Fred C. Framsted
Golf Operations Manager

CC: Rob Wonder, Assistant City Manager
Denny Plato, Golf Superintendent
Chuck Corica Golf Complex

WATER RESOURCES CONTROL BOARD
DIVISION OF WATER QUALITY - UST CLEANUP PROGRAM
SITE SPECIFIC QUARTERLY REPORT
01/01/92 THROUGH 03/31/92

AGENCY # : 10000 SOURCE OF FUNDS: F SUBSTANCE: 8006619
StID : 3564
SITE NAME: Alameda Golf Course DATE REPORTED : 08/16/91
ADDRESS : 1 MemorialClubhseDr DATE CONFIRMED: 08/16/91
CITY/ZIP : Alameda 94501 MULTIPLE RPs : N

SITE STATUS

CASE TYPE: G CONTRACT STATUS: 3 EMERGENCY RESP:
RP SEARCH: S DATE COMPLETED: 11/21/91
PRELIMINARY ASMNT: DATE UNDERWAY: 02/26/92 DATE COMPLETED:
REM INVESTIGATION: DATE UNDERWAY: DATE COMPLETED:
REMEDIAL ACTION: DATE UNDERWAY: DATE COMPLETED:
POST REMED ACT MON: DATE UNDERWAY: DATE COMPLETED:

ENFORCEMENT ACTION TYPE: 1 DATE ENFORCEMENT ACTION TAKEN: 11/21/91
LUFT FIELD MANUAL CONSID: 2, HSCA
CASE CLOSED: DATE CASE CLOSED:
DATE EXCAVATION STARTED : 07/10/91 REMEDIAL ACTIONS TAKEN: ET

RESPONSIBLE PARTY INFORMATION

RP#1-CONTACT NAME: Robert Wonder, asst.
COMPANY NAME: City Of Alameda
ADDRESS: 2263 Santa Clara, rm.301
CITY/STATE: Alameda, Ca 94501

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

May 20, 1992

Fred Framsted
Alameda Golf Course
1 Memorial Club House Drive
Alameda, CA 94501

STID 3564

RE: The Alameda Golf Course site located at 1 Memorial Club House Drive, Alameda, California

Dear Mr. Framsted,

This office has reviewed the work plan, dated February 26, 1992, for the installation of two monitoring wells and the revised well profile. The work plan is acceptable to this office.

It was stated in the work plan that field screening will be the criteria for determining which soil samples, collected from the monitoring well locations, would be analyzed. This office is requiring that you analyze a minimum of one soil sample from each of the two well locations.

Additionally, soil samples were not collected during the installation of the existing monitoring well, north of the tank pit, and confirmatory soil samples collected subsequent to the tank pit excavation detected contamination on the northern side of the tank pit. Consequently, additional soil samples must be collected from the northern side of the tank pit to determine the lateral extent of the soil contamination. Please submit a work plan for this additional soil investigation within 45 days of the date of this letter.

Please be aware that after the installation of the monitoring wells, you are required to survey all three wells to an established benchmark and to an accuracy of 0.01 foot. Additionally, groundwater elevations are to be measured monthly for 12 consecutive months and then quarterly thereafter. Groundwater samples are to be collected and analyzed quarterly. Both soil and groundwater samples must be analyzed for the contaminants associated with gasoline and unknown tanks listed in

Table 2 of the California Regional Water Quality Control Board's (RWQCB) Staff Recommendations for the Initial Evaluation and Investigation of Underground Tanks.

Field work should commence within 60 days of the receipt of this letter. Please be reminded that a report documenting the results from work performed is due to this office within 45 days of completion of field activities. Subsequent reports are to be submitted quarterly until this site qualifies for final RWQCB "sign-off". Such quarterly reports are due the first day of the second month of each subsequent quarter.

The referenced initial quarterly reports must describe the status of the investigation and must include, among others, the following elements:

- o Details and results of all work performed during the designated period of time: records of field observations and data, boring and well construction logs, water level data, chain-of-custody forms, laboratory results for all samples collected and analyzed, tabulations of free product thicknesses and dissolved fractions, etc.
- o Status of groundwater contamination characterization
- o Interpretation of results: water level contour maps showing gradients, free and dissolved product plume definition maps for each target component, geologic cross sections, etc.
- o Recommendations or plans for additional investigative work or remediation

Please be advised that this is a formal request for technical reports pursuant to California Water Code Section 13267 (b). Any extensions of the stated deadlines, or modifications of the required tasks must be confirmed in writing by either this agency or RWQCB.

Per my conversation with you on April 2, 1992 and my conversation with Gary Zaccor on April 7, 1992, it appears that the Bay Area Air Quality Management District (BAAQMD) was not notified of the aeration of the contaminated soil from the tank pits. If, in fact, the soil is being aerated at your site, you must notify BAAQMD immediately.

In April 1992, you were sent an Unauthorized Release Report form to fill out and submit to this office. This Department has not yet received the completed form, and is requesting that you submit it within 30 days of the date of this letter.

If you have any questions or comments, please contact Juliet Shin
at (510) 271-4320.

Sincerely,

Scott O. Seery, CHMM
Senior Hazardous Materials Specialist

cc: Richard Hiett, RWQCB

Richard Quarante, Alameda Fire Dept.

Gary Zaccor
Zaccor Corporation
791 Hamilton Avenue
Menlo Park, CA 94025



December 17, 1991

91 DEC 23 PM 1:30

Thomas F. Peacock, Supervising HMS
Hazardous Material Division
Health Care Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

Dear Tom:

This is a more detailed response to your December 3rd letter and follows our telephone discussion of December 6.

We were notified on October 7 in a letter from Pam Evans that we were requested to provide:

- (1) a work plan for the installation of required groundwater monitoring wells
- (2) a copy of the hazardous waste manifest signed by a representative of the disposal facility for the removed tanks (enclosed for your records)
- (3) an underground storage tank unauthorized release report
- (4) the disposition of excavated contaminated soil.

With respect to developing a work plan for installation of the monitoring wells to test groundwater, we had made arrangements with Zaccor Corporation to develop and install these wells, once your office had approved our plan as requested. Apparently, there was a misunderstanding with the contractor. In any event, we have reaffirmed with the Zaccor Corporation that they will develop the workplan and secure your authorization to proceed.

Regarding the release form, our original intent was to submit it in a package with the other requested information. Subsequently, we have decided that the underground storage tank release report will be completed by City staff. It will be forwarded to your upon completion.

Regarding a signed copy of the Hazardous Waste Manifest, it will be enclosed with this letter.

After the underground gas tank was removed, Zaccor Corporation removed additional soil from contaminated areas indicated by test results from the mobil testing lab that was on site that day. This

Office of the City Manager, Room 301

City Hall
Santa Clara Avenue at Oak Street · 94501
415.748 4505

Thomas F. Peacock
December 17, 1991
Page 2

soil was hauled to an isolated area at the Golf Complex for remediation. Before any of the contaminated soil was hauled to the designated area, Gary Zaccor and Ms. Evans discussed site preparation and agreed the site was suitable for remediation purposes. The maintenance project proceeded on schedule as discussed with Ms. Evans, and with the understanding that after final lab reports were analyzed, we might be required to install additional groundwater monitoring wells to continue testing this area.

I believe this summarizes our intention to comply with the groundwater investigation requirements for the Alameda Golf Course. If you require additional information or wish to contact me regarding the above, feel free to call me at 748-4653, Monday through Friday between the hours of 8:30 a.m. to 5 p.m.

Very truly yours,



Fred C. Framsted
Golf Operations Manager

FCF/jaa

cc: Rob Wonder, Assistant City Manager
Eddy So, R.W.Q.C.B.
Mark Thompson, Alameda County District
Attorney's Office



December 9, 1991

Thomas F. Peacock, Supervising HMS
Hazardous Material Division
Health Care Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

Dear Tom:

Thank you for taking the time to answer my questions regarding my inquiries to your letter dated December 3, 1991, notifying the City of the requirements for a groundwater investigation and a work plan.

As I explained to you, the removal of the underground gas tank at the Golf Complex was completed by Zacca Corporation in the presence of Pam Evans earlier this year. The follow up information requested by Ms. Evans was also sent to Zacca Corporation and it was my understanding that they would complete the work plan and supply a copy of the signed manifest for the tank's removal. I have left a message for Gary Zacca to contact me regarding the status of the above information and will follow up with him as soon as possible.

After I have had a chance to review Ms. Evans' letter with Zacca Corporation representatives, I will contact you to update you on the status of your request and make sure this work is completed in a timely manner.

Very truly yours,

A handwritten signature in black ink, appearing to read "Fred C. Framsted".

Fred C. Framsted
Alameda Golf Complex
Operations Manager

FCF/erb

cc: Rob Wonder

Office of the City Manager, Room 301

City Hall
Santa Clara Avenue at Oak Street · 94501
415.748 4505

91 DEC 12 PM 12:29

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
~~XXX~~(510) 271-4320

December 3, 1991
STID# 3564

SECOND NOTICE

City of Alameda
ATTN: Robert Wonder, Asst. City Mgr.
2263 Santa Clara, Rm. 301
Alameda, CA 94501

Alameda Golf Course
1 Memorial Clubhouse Dr.
Alameda, CA 94501

SITE

Date First Reported 08/16/91
Substance: gasoline
Petroleum (X)Yes

Dear Mr. Framsted:

You (Fred Framsted of the Recreation & Park Dept.) were notified of the requirements for a groundwater investigation in a letter dated October 7, 1991, from Pam Evans of this office.

You were requested to provide a work plan to this office before beginning work on the site. This has not occurred to date. You were also directed to submit, by October 18, the following documents:

1. Underground Storage Tank Unauthorized Release Report (which was enclosed)
2. Copy of the signed manifest for the tank removal
3. Disposition of excavated contaminated soil

To date, none of these documents have been submitted to this office.

The presence of 8,200 ppb of TPHg and 210 ppb of benzene in the groundwater is orders of magnitude above any acceptable level. This contamination must be further investigated and the site remediated. The required work plan should have a time table which includes specific actions and their expected dates of accomplishment. Any questions should be directed to this office.

Sincerely,

Thomas F. Peacock, Supervising HMS
Hazardous Material Division

fe

cc: Eddy So, RWQCB
Fred Framsted, City of Alameda, 2263 Santa Clara, Rm.201
Mark Thompson, Alameda County District Attorney's Office

John F. Schmittgen
(915) 931-6000
BNA@MID

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

October 7, 1991

Fred Framsted
City of Alameda
Parks and Recreation
Oak St. at Santa Clara St.
Alameda CA 94501

*748-4565
4505*

RE: Groundwater Investigation Requirements for Alameda Golf Course, 1 Memorial Club House Dr., Alameda CA

Dear Mr. Framsted:

As we discussed today by telephone, I have reviewed the tank removal report submitted for your site by Zaccor Corporation. The petroleum contamination found in soil and groundwater (including benzene contamination) in the course of the removal requires further investigation at your site. Based on my observations the day of the tank removal, and upon soil sampling results that were supplied in the report, nearly all of the contaminated soil has been removed from the tank pit. However, there were also low levels of petroleum constituents remaining in the west wall of the tank pit (sample #6 area). The benzene, toluene, ethyl benzene and xylene (BTEX) found here is a potential threat to the shallow groundwater at your site.

east - my mistake

You are required to investigate the full extent of petroleum contamination affecting soil and groundwater at and beyond your site. At a minimum, three groundwater monitoring wells will be required onsite for your investigation. I understand that you now have an operating groundwater monitoring well a few feet from the former tank pit. It is important to determine whether this well is up gradient or down gradient from the contamination in proposing locations for other wells. Boring logs, well construction information, and sampling data for this well should be submitted with your work plan and/or technical reports.

Wells must be sampled and samples chemically analyzed monthly for a minimum of three months. After three consecutive months of sampling, all monitoring wells must be sampled at least quarterly for a minimum of one year. You must monitor and chemically analyze for Total Petroleum Hydrocarbons as gasoline (TPHg) and BTEX components. A groundwater gradient map must be developed for the site.

A technical report must be submitted within three months of the time that the first sampling results are available. This report must present and interpret the information generated during the

Fred Framsted
City of Alameda
October 7, 1991
Page 2 of 2

initial subsurface investigation. All reports and proposals must be signed by a qualified person. All work must be performed according to the guidelines found in the **Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks** and the **Leaking Underground Fuel Tank Manual**. Copies of these documents can be obtained from the RWQCB office in Oakland. All proposals, reports, and analytical results pertaining to this investigation and site remediation must be sent to this office and to:

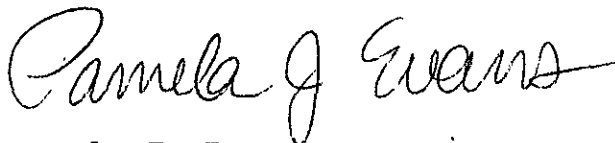
Eddy So
RWQCB
2101 Webster St., 4th Floor
Oakland CA 94612

Your work plan must, at a minimum, address the items listed on Attachment 1 (enclosed). I strongly recommend that you submit your work plan for review to this office **before** beginning work at the site. You must also submit the following documents and information to this office **by October 18, 1991**:

1. Underground Storage Tank Unauthorized Release Report (form enclosed).
2. Copy of the hazardous waste manifest signed by a representative of the disposal facility for the removed tanks.
3. Disposition of excavated contaminated soil.

You may contact me with any questions at 271-4320.

Sincerely,



Pamela J. Evans
Hazardous Materials Specialist

Enclosures

c: Eddy So, RWQCB
Scott Zaccor, Zaccor Corporation

STID
3564

DATE:
TO : Local Oversight Program
FROM:
SUBJ: Transfer of Eligible Oversight Case

No leak report
P. 7ed?

Site name: City of Alameda Golf Course
Address: 1 Memorial Clubhouse Drive city Alameda zip 94501

Closure plan attached? Y N DepRef remaining \$ 62,000

DepRef Project # 5045A STID #(if any) 0-3564

Number of Tanks: 2 removed? N Date of removal 7-10-91

Samples received? N Contamination: Yes

Petroleum N Types: Avgas Jet leaded unleaded Diesel
fuel oil waste oil kerosene solvents

Monitoring wells on site 1 Monitoring schedule? Y N sort of*

LUFT category 1 2 3 * H S C A R W G discovered 8-16-91

Briefly describe the following:

Preliminary Assessment Consultant had field analytical equipment + got extent of soil contam.

Remedial Action Bad soil removed. 1 MW existed already - long standing.

Post Remedial Action Monitoring _____

Enforcement Action No wells to date - letter sent 10-7-91.

This site had one known ^{500 gal} tank. In course of removal in 7/91 a second, badly corroded ~ 110 gal tank was discovered. Soil + GW contamination found in samples taken 7/91. A MW exists onsite upgradient from tank pit. They say no contamination. ^{has been found in that well.} I wrote letter 10/7/91 informing City of need for GW investigation.

(4) Sample Collection Equipment and Procedures

Water samples collected by WCC were taken with a clean Teflon bailer and placed in three laboratory-prepared sample bottles. The bottles were provided by IT Laboratories in San Jose including the addition of a small amount of HCl as a preservative. The samples were kept in cold storage until delivery to the laboratory.

B. SOIL SAMPLING

Soil samples were collected during the advancement of Borings S-A, and S-2. Locations of these borings are shown on Figure 2. Continuous sampling was conducted during the advancement of Boring S-A while samples were collected at 5-foot intervals for S-2. Samples from S-2 were taken by advancing a 2 1/2-inch O.D. modified California sampler through the hollow stem of the augers. The sampler was driven a maximum of 18 inches, using a 140-pound hammer with a 30-inch drop. The number of blows required to drive the sampler the final 12 inches are shown on the boring logs in Appendix C.

The samples were retained in four 4-inch-long, 2-inch-diameter brass liners within the sampler. The brass liners were labeled A through D from bottom to top. The ends of each tube were examined by a WCC geologist and described using the Unified Soil Classification System. The descriptions are included in the appended boring logs. The depth to groundwater is also shown on the logs.

In general, the soil sample in brass liner A was retained for chemical analysis by covering both ends of the liner with Teflon sheeting and sealing with plastic end caps. The sample was then labeled and stored in an ice chest chilled with dry ice. The soil



July 29, 1991

Pamela Evans
Hazardous Materials Specialist
DEPARTMENT OF ENVIRONMENTAL HEALTH
80 Swan Way
Room 200
Oakland, CA 94621

Dear Ms. Evans:

RE: TANK REMOVAL - ALAMEDA GOLF COMPLEX

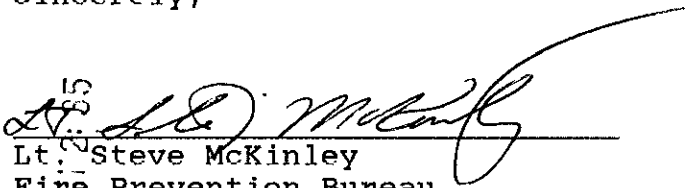
On July 10, 1991, you and I witnessed the removal of a deteriorated tank from Alameda Golf Complex. The tank was approximately 100 gallons.

Because of its condition and the way the tank was made, I believe it was installed around 1920. After further investigation, I believe it to be a gasoline tank. During the late 1920's through 1957, no diesel equipment was used at the golf complex.

I hope this will help clarify what product was stored in the tank.

Please call if you need any other information.

Sincerely,


Lt. Steve McKinley
Fire Prevention Bureau

SJM:pgs

91 AUG -2
11 2 35

Alameda Fire Department

Headquarters
1300 Park Street · 94501
415.748 4601

CC: FRED FRAMSTED
ALAMEDA GOLF COMPLEX

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Inspection Form

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

II, III

Site ID # _____ Site Name City of Alameda Golf Course Today's Date 7/10/91

Site Address 1 Memorial Clubhouse Dr.

City Alameda Zip 94501 Phone 748-4653

MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

I. Haz. Mat/Waste GENERATOR/TRANSPORTER

II. Business Plans, Acute Hazardous Materials

III. Underground Tanks Removal
2 VST's - (1) 500 gal gasoline + (1) 100 gal

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments: In the course of a planned removal of a 500gal gasoline tank, a second ~100 gal tank was found + removed. 500gal tank was being used up until ~2 weeks ago, + was apparently in good condition. Second ~100 gal tank was extensively corroded. Removal work by Zaccor Company, Greg Zaccor. SOIL CONDITIONS OBSERVED: 'Noticeable odor' was present. Groundwater noted in pit at ~4 1/2' - 5', with floating product present. SOIL SAMPLING: Done by Helen Mawhinney of Environmental Technical Services. (1) Stockpiles: Two separate stockpiles were made because contamination seemed worse in area of smaller tank. Each pile was less than 20 yd³. Stockpile A (around 50 gal tank) had 1 composite sample taken. Stockpile B - 1 composite sample (lab to composite). (2) Pit Samples: 1 taken from soil directly beneath 100gal tank. 4 pit wall samples taken at ~4.5' (at gw level) one from each of 4 walls. (3) GW sample - not taken in my presence nor E+W wall. Gary Zaccor stated excavated soil would be moved to plastic sheeted, bermed area for storage. Short length (~10') of piping was disposed with fuel dispenser several days ago. James hauled under manifest to Erickson (90573930)

II.A BUSINESS PLANS (Title 19)

- 1. Immediate Reporting 2703
- 2. Bus. Plan Stds. 25503(b)
- 3. RR Cars > 30 days 25503.7
- 4. Inventory Information 25504(a)
- 5. Inventory Complete 2730
- 6. Emergency Response 25504(b)
- 7. Training 25504(c)
- 8. Deficiency 25505(a)
- 9. Modification 25505(b)

II.B ACUTELY HAZ. MATLS

- 10. Registration Form Filed 25533(a)
- 11. Form Complete 25533(b)
- 12. RMPP Contents 25534(c)
- 13. Implement Sch. Req'd? (Y/N) _____
- 14. OffSite Conseq. Assess. 25524(c)
- 15. Probable Risk Assessment 25534(d)
- 16. Persons Responsible 25534(g)
- 17. Certification 25534(f)
- 18. Exemption Request? (Y/N) 25535(b)
- 19. Trade Secret Requested? 25538

III. UNDERGROUND TANKS (Title 23)

- General
- 1. Permit Application 25284 (H&S)
 - 2. Pipeline Leak Detection 25292 (H&S)
 - 3. Records Maintenance 2712
 - 4. Release Report 2651
 - 5. Closure Plans 2670

- Monitoring for Existing Tanks
- 6. Method
 - 1) Monthly Test
 - 2) Daily Vadose
 - Semi-annual groundwater
 - One time soils
 - 3) Daily Vadose
 - One time soils
 - Annual tank test
 - 4) Monthly Gndwater
 - One time soils
 - 5) Daily Inventory
 - Annual tank testing
 - Cont pipe leak det
 - Vadose/gndwater mon.
 - 6) Daily Inventory
 - Annual tank testing
 - Cont pipe leak det
 - 7) Weekly Tank Gauge
 - Annual tank testing
 - 8) Annual Tank Testing
 - Daily Inventory
 - 9) Other _____

- 7. Precs Tank Test 2643
 - Date: _____
- 8. Inventory Rec. 2644
- 9. Soil Testing . 2646
- 10. Ground Water. 2647

- New Tanks
- 11. Monitor Plan 2632
 - 12. Access. Secure 2634
 - 13. Plans Submit 2711
 - Date: _____
 - 14. As Built 2635
 - Date: _____

Rev 8/88

Contact: _____

Title: _____

Signature: Remigijus Plato

Inspector: _____

Signature: Pamela J. Evans

Also present during excavation: Cathy Gates of Environmental Health, Steve McKinney of Alameda Fire Dept, Fred Johnsted of Golf Course.

II, III

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

III, III

white -env.health
yellow -facility
pink -files

Site ID # _____ Site Name City of Alameda Today's Date 7/10/91

Site Address 1 Memorial Clubhouse Dr.

City Alameda Zip 94501 Phone 748-4653

MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

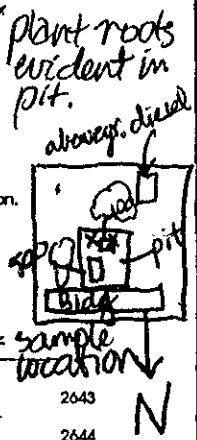
Inspection Categories:

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

Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments:

Work carried out: 500 gal former gasoline tank removed. During over excavation, a 2nd metal container was found - appears to be old ~100 gal battery Zaccor Companies, Inc. Condition tank, piping: Tank was apparently in good condition. 2nd ~100 gal rivetted tank was extensively decayed. Gasoline tank used bit ~2 weeks ago. Soil conditions: Floating product on groundwater in pit. Much color variation in pit + STRONG odors noted. Sampling: Helix Mawhinney of Environmental Technical Services took soil + groundwater sampling. Stockpiles - 3 discrete samples to be lab composited from ~15 yd³ Pit: 1 from depth of 4'5", ~1'5" below old 100 gal tank. 4 additional from each of 4 pit walls at gw level ~6' deep. Excavated soil divided into 2 piles based on appearance of soil. Disposition of excavation/soils: No plastic sheeting was laid beneath the 2 piles today. Gary Zaccor stated soil would be Disposal of tank, piping, rinsate: Tank to Erickson under manifest 90573930. Piping was removed with dispenser previously. 2nd tank was removed with 500 gal tank. Also present during tank removal: tank.



II.A BUSINESS PLANS (Title 19)

- 1. Immediate Reporting 2703
- 2. Bus. Plan Slids. 25503(b)
- 3. R/R Cars > 30 days 25503.7
- 4. Inventory Information 25504(a)
- 5. Inventory Complete 2730
- 6. Emergency Response 25504(b)
- 7. Training 25504(c)
- 8. Deficiency 25505(a)
- 9. Modification 25505(b)

II.B ACUTELY HAZ. MAT'L'S

- 10. Registration Form Filed 25533(a)
- 11. Form Complete 25533(b)
- 12. RMPP Contents 25534(c)
- 13. Implement Sch. Req'd? (Y/N)
- 14. Off-Site Conseq. Assess. 25524(c)
- 15. Probable Risk Assessment 25534(d)
- 16. Persons Responsible 25534(g)
- 17. Certification 25534(i)
- 18. Exemption Request? (Y/N) 25536(b)
- 19. Trade Secret Requested? 25538

III. UNDERGROUND TANKS (Title 23)

- 1. Permit Application 25284 (H&S)
- 2. Pipeline Leak Detection 25292 (H&S)
- 3. Records Maintenance 2712
- 4. Release Report 2651
- 5. Closure Plans 2670

- 6. Method
 - 1) Monthly Test
 - 2) Daily Vadose
 - Semi-annual groundwater
 - One time soils
 - 3) Daily Vadose
 - One time soils
 - Annual tank test
 - 4) Monthly groundwater
 - One time soils
 - 5) Daily inventory
 - Annual tank testing
 - Cont pipe leak det
 - Vadose/gndwater mon.
 - 6) Daily inventory
 - Annual tank testing
 - Cont pipe leak det
 - 7) Weekly Tank Gauge
 - Annual tank testing
 - 8) Annual Tank Testing
 - Daily inventory
 - 9) Other X = sample location

- 7. Precs Tank Test 2643
- Date: _____
- 8. Inventory Rec. 2644
- 9. Soil Testing 2646
- 10. Ground Water. 2647

- 11. Monitor Plan 2632
- 12. Access. Secure 2634
- 13. Plans Submit 2711
- Date: _____
- 14. As Built 2635
- Date: _____

Contact: _____
Title: _____
Signature: _____

Inspector: _____
Signature: Camela J Evans

moved to a sheeted, bermed area if samples show high levels of contamination

Steve McKinney of Alameda Fire Dept., Fred Frank with Golf Course

Please print or type. Form designed for use on 12-pitch typewriter.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CA C0005353920173017
 Manifest Document No. 75391

2. Page 1 of 1
 Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
City of Alameda - Golf Course Operations
City Hall - Room #201 - Santa Clara & Oak Str.

A. State Manifest Document Number
90573930

4. Generator's Phone **415) 522-4100** **94501 Alameda, CA**

B. State Generator's ID

5. Transporter 1 Company Name
Dexanna, Ltd.

6. US EPA ID Number
CAD 082438566

C. State Transporter's ID
204797

D. Transporter's Phone **(415) 687-1292**

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Erickson, Inc.
255 Parr Blvd.
Richmond, Ca. 94801

10. US EPA ID Number
CAD 009466392

G. State Facility's ID
CAD009466392

H. Facility's Phone
(415) 235-1393

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
a. Waste Empty Storage Tank			State 312
NON-RCRA Hazardous Waste Solid.	0101	CM 00500 P	EPA/Other NONE
b. 1 Decomposed Empty Storage Tank			State
NON-RCRA Hazardous Waste Solid	001	00100 P	EPA/Other
c.			State
			EPA/Other
d.			State
			EPA/Other

J. Additional Descriptions for Materials Listed Above
 Qty. 1 Empty Storage Tank (s) #6592 (6594)
 Tank (s) have been inerted with 15 lbs.
 Dry Ice per 1000 Gal. Capacity.

K. Handling Codes for Wastes Listed Above
 a. 01
 b. 01
 c.
 d.

15. Special Handling Instructions and Additional Information

Keep away from sources of ignition. Always wear hardhats when working around
 U.S.T.'s 24 Hr. Contact Name **Fred Framsted** & Phone **(415) 748-4653**

18.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name _____ Signature _____ Month Day Year **07 10 91**

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name **James R. Cox** Signature _____ Month Day Year **07 10 91**

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name _____ Signature _____ Month Day Year

19. Discrepancy Indication Space

12) 5/B - CM

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name **Donald A. Ross** Signature _____ Month Day Year **07 10 91**

Do Not Write Below This Line

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550
 GENERATOR
 TRANSPORTER
 FACILITY

90573930

**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320**

Project Specialist (print) Katherine Chesick

DEPARTMENT OF ENVIRONMENTAL HEALTH
1000 The Stanch Field Floor
Oakland, CA 94612
Telephone (415) 874-7237

... and found to be acceptable...
... all contractors and craftsmen involved with...
... alterations of these plans and specifications...
... to the Fire and...
... to determine if such...
... at least 48 hours prior to the...
... inspections:
 Removal of Tank and Piping
 Sampling
 Final Inspection
 ... of a permit to operate is dependent on compliance with accepted plans and all applicable laws and regulations

6/6/91
Katherine Chesick
THIS IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS.

UNDERGROUND TANK CLOSURE PLAN

* * * Complete according to attached instructions * * *

1. Business Name City of Alameda California
 - Business Owner Fred Framsted - Golf Course Operations
 2. Site Address Memorial Clubhouse Drive
City Alameda, Calif. Zip 94501 Phone 415-748-4653
 3. Mailing Address City Hall - Room 201, Santa Clara @ Oak St.
City Alameda, Calif. Zip 94501 Phone 415-748-4653
 4. Land Owner City of Alameda Calif. - Recreation & Park Department
Address Santa Clara @ Oak St. City, State Alameda, CA Zip 94501
Room 201
 5. Generator name under which tank will be manifested City of Alameda - California Recreation & Park Department
- EPA I.D. No. under which tank will be manifested CAC000585392

6. Contractor Zaccor Companies Inc.
Address 791 Hamilton Avenue
City Merle Park, Ca. Phone 415-363-2181
License Type A ID# 478799

7. Consultant Environmental Bio-Systems
Address 30028 Industrial Parkway, P.W.
City Hayward, CA Phone 415-429-9988

8. Contact Person for Investigation
Name Gary Zaccor Title Project Mgr.
Phone 415-363-2181

9. Number of tanks being closed under this plan 1
Length of piping being removed under this plan unknown
Total number of tanks at facility 1

10. State Registered Hazardous Waste Transporters/Facilities (see instructions).

** Underground tanks are hazardous waste and must be handled **
as hazardous waste

a) Product/Residual Sludge/Rinsate Transporter

Name Allied Oil & Pumping EPA I.D. No. CAT080014277
Hauler License No. 77995 License Exp. Date _____
Address P.O. Box 399
City Alviso State CA Zip 95002

b) Product/Residual Sludge/Rinsate Disposal Site

Name Refinery Services EPA I.D. No. CAD083166728
Address _____
City Patterson State CA Zip _____

c) Tank and Piping Transporter

Name Erickson, Inc. EPA I.D. No. CA0 009466392
Hauler License No. #019 License Exp. Date _____
Address 225 Parr Blvd.
city Richmond State CA Zip 94801

d) Tank and Piping Disposal Site

Name Erickson, Inc. EPA I.D. No. CA0 009466392
Address 225 Parr Blvd.
city Richmond State CA Zip 94801

11. Experienced Sample Collector

Name Brenda McNabb or Timothy Babcock
Company Environmental Bio-Systems
Address 30028 Industrial Parkway, S.W.
city Hayward State CA Zip 94544 Phone 415-429-9988

12. Laboratory

Name Cenamitrix Laboratory, Inc
Address 1961 Concourse Drive, Ste. E
city San Jose State CA Zip 95131
State Certification No. #151

13. Have tanks or pipes leaked in the past? Yes [] No [X]

If yes, describe. _____

14. Describe methods to be used for rendering tank inert

triple rinse, hydroblast and dry ice
at 6.5 lbs. per 100 gallons.

Before tanks are pumped out and inerted, all associated piping must be flushed out into the tanks. All accessible associated piping must then be removed. Inaccessible piping must be plugged.

* { The Bay Area Air Quality Management District (771-6000), along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of explosion proof combustible gas meters to verify tank inertness. It is the contractor's responsibility to bring a working combustible gas meter on site to verify tank inertness.

15. Tank History and Sampling Information

Tank		Material to be sampled (tank contents, soil, ground-water, etc.)	Location and Depth of Samples
Capacity	Use History (see instructions)		
500 gal	gasoline	soil	one sample beneath the tank a max. of 2 ft below native soil/fill interface.
* 1 sample taken per 20' associated piping.			

* { One soil sample must be collected for every 20 feet of piping that is removed. A ground water sample must be collected should any ground water be present in the excavation.

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (Estimated) <i>less than 10 yds.</i>	Sampling Plan <i>1 discreet sample collected under supervision of Health Dept. inspector.</i>

* { Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.

16. Chemical methods and associated detection limits to be used for analyzing samples

The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits should be followed. See attached Table 2.

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Method Number	Method Detection Limit
<i>TPH-G BTX & E Total Lead</i>	<i>5030 8020 or 8240 AA</i>	<i>BCFID 8020 or 8240 AA</i>	<i>1 part per million (ppm) → 0.005 ppm</i>

17. Submit Site Health and Safety Plan (See Instructions)

18. Submit Worker's Compensation Certificate copy

Name of Insurer State Fund Compensation

19. Submit Plot Plan (See Instructions)

20. Enclose Deposit (See Instructions)

- * { 21. Report any leaks or contamination to this office within 5 days of discovery. The report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report form. (see Instructions)
- * { 22. Submit a closure report to this office within 60 days of the tank removal. This report must contain all the information listed in item 22 of the instructions.

I declare that to the best of my knowledge and belief the statements and information provided above are correct and true.

I understand that information in addition to that provided above may be needed in order to obtain an approval from the Department of Environmental Health and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

* { Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

Signature of Contractor

Name (please type) Zaccor Companies, Inc.

Signature Mary Zaccor

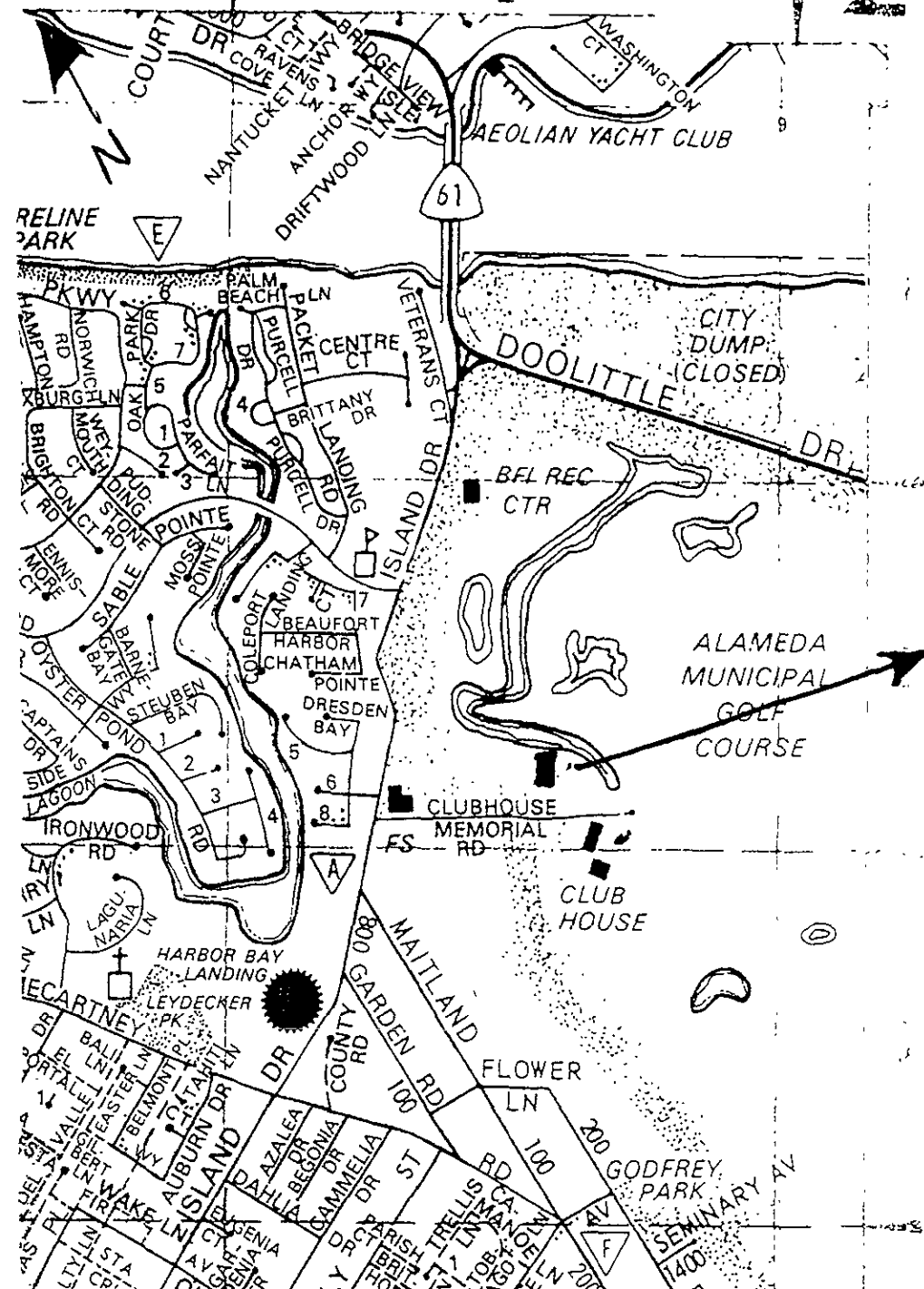
Date March 20, 1991

* Signature of Site Owner or Operator

Name (please type) City of Alameda

Signature Dred C. Fremsted

Date 4-2-91



5000 gallon
 water tank
 100 ft

MW 1

Maxmore Rd

▲ disperser

12

TABLE 1

EMERGENCY INFORMATION

EMERGENCY TELEPHONE NUMBERS

In Emergency: 911

Site Telephone: (415) 999-2016
(415) 999-8806

Alternate Telephone No.
(415) 363-2181

Hospital: Alameda Hospital
2070 Clinton Ave.
Alameda, CA
(415) 522-3700

Police and Fire Department: 911

Poison Control: 1 (800) 792-0720

Zaccor Companies, Inc.

Project Manager, Gary Zaccor wk. (415) 363-2181
hm. (415) 769-9528

Site Safety Officer, Scot Zaccor wk. (415) 363-2181
hm. (415) 327-7998

Corp. Safety Officer, Scot Zaccor wk. (415) 363-2181
hm. (415) 965-5190

Directions to Emergency Hospital (see attached map)

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FOR CONTINUATION SEE MAP 9



FOR CONTINUATION SEE MAP 8

FOR CONTINUATION SEE MAP 12

FOR CONTINUATION SEE MAP 21

314.00

11

12

13

14

15

16

17

18

19

20

21

22

SITE HEALTH AND SAFETY PLAN SUMMARY

SITE NAME: Golf Couse for Recreation and Parks Department

ADDRESS: 1 Clubhouse Drive
Alameda, CA

SITE TELEPHONE: (415) 999-2016 (Scot Zaccor mobile)
(415) 999-8806 (Portable phone)
(415) 363-2181 (main office)

INVESTIGATION DATE: week of May 27, 1991

SITE SAFETY OFFICER: SCOT ZACCOR

PROJECT MANAGER: GARY ZACCOR

TYPE OF INVESTIGATION

- Soils Sampling
- Groundwater Sampling
- Site Walkthrough
- Remedial Activities
- Subcontractor Supervision
- Other: Tank Removal

POTENTIAL HAZARDS

- Organics Acids
- Inorganics Bases
- Heavy Metals Fire
- Solvents
- Pesticides
- Other: _____

PERSONAL PROTECTIVE EQUIPMENT - Level: A[] B[] C[] D[x]

- | | |
|--|---|
| <input checked="" type="checkbox"/> Hard Hat | <input checked="" type="checkbox"/> Ear Plugs/Muffs |
| <input type="checkbox"/> Boots | <input type="checkbox"/> Safety Glasses |
| <input checked="" type="checkbox"/> Steel toed | |
| <input type="checkbox"/> Chemical resistant | <input type="checkbox"/> Respirator |
| | <input type="checkbox"/> Organic vapor cartridge |
| <input type="checkbox"/> Coveralls | <input type="checkbox"/> Particulate filters |
| <input type="checkbox"/> Cotton | <input type="checkbox"/> Other |
| <input type="checkbox"/> Tyveks | <input checked="" type="checkbox"/> First Aid Kit |
| <input type="checkbox"/> Gloves | <input checked="" type="checkbox"/> Organic Vapor Meter |
| <input type="checkbox"/> Disposable inner PVC | <input type="checkbox"/> Other: OVA (OVM backup) |
| <input checked="" type="checkbox"/> Disposable outer vinyl | |

1.0 INTRODUCTION

This Site Health and Safety Plan, developed in accordance with Occupational Safety and Health Administrative (OSHA) standards for hazardous waste operations (29 CFR 1910.120), establishes general health and safety protocol for Zaccor Companies, Inc., ("ZCI") personnel at the Golf Course for Recreation and Parks Department at 1 Clubhouse Drive, Alameda California.

For informational purposes only, this plan may be provided to subcontractors of ZCI involved in activities at the Golf Course for Recreation and Parks Department at 1 Clubhouse Drive, Alameda California facility.

However, entities and personnel other than ZCI staff shall be solely responsible for their own health and safety and shall independently assess onsite conditions and develop their own health and safety protocol. Other entities or personnel that anticipate using health and safety measures which are less stringent than ZCI's measures should immediately contact ZCI's Site Safety Officer.

Zaccor Companies, Inc. has developed a Corporate health and Safety plan. The Corporate Plan complies with current health and safety regulations, including OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response. Many of the protocols of the corporate plan are conducted on a routine basis (general training, respirator fit testing, general medical record keeping, etc.) and are not repeated herein. The Corporate Plan was developed for ZCI employees. Questions regarding the ZCI Corporate Plan are referred to the ZCI Corporate Safety Supervisor, Scot Zaccor.

A copy of the Zaccor Companies, Inc. Field Investigations Site Health and Safety Plan along with any addenda, if issued, containing activity specific health and safety information will be kept in a conspicuous location on-site at all times while work is being conducted.

2.0 KEY HEALTH AND SAFETY PERSONNEL

The ZCI Site Safety Office (SSO) is Scot Zaccor. In the absence of the SSO during field activities, a member of the field investigation team will be designated as the ZCI field Site Safety Officer (FSSO). The SSO or FSSO are responsible for the following:

- Observing field activities for compliance with this Site Health and Safety Plan, applicable addenda, ZCI's Corporate Health and Safety Plan.
- Modifying health and safety protocols or terminating field work when unsafe work conditions exist.

- Familiarizing ZCI personnel with health and safety protocols.
- Ensuring that ZCI field personnel wear appropriate personal protective equipment.
- Recording data from direct reading instruments and evaluating potential hazards to ZCI personnel.
- Monitoring decontamination procedures.
- Recording the occurrence of any site injury or illness.

3.0 SITE DESCRIPTION

- Golf Course for Recreation and Parks Department

4.0 PROPOSED FIELD ACTIVITIES

The proposed field activities include:

1. Excavation of areas where underground storage tank is potentially located.
2. Removal of one (1) 500 gallon UST.
3. Soil Sampling a/o ground water sampling.
4. Re-covering the disturbed areas with asphaltic concrete or concrete (mix to be specified per City specs).

5.0 HAZARD ANALYSIS

1. Inspecting site for obstructions in the path of work.

5.1 POTENTIAL PHYSICAL HAZARDS

Field personnel should be cognizant of potential physical hazards associated with use of heavy equipment, steam cleaning equipment, and electrical equipment during field operations. Equipment should be operated by S.A.R.A. trained personnel. Appropriate protective equipment includes the following:

- Hardhats, safety glasses, and steel-toe boots will be worn.
- Gloves will be worn when handling equipment or moving drums.

-Hearing protection (ear plugs or ear muffs) will be worn when noise becomes discomforting.

-A first aid kit will be available at the jobsite.

Adverse climate conditions, primarily heat are important considerations in planning and conducting site operations. Heat stress is an associated concern, particularly when protective clothing is worn. Preventative measures include the following:

-Frequent rest periods in the shade when heat and/or humidity is high.

- Provide water and/or commercial electrolyte solutions. Drinking of these fluids will be encouraged.

-Suitable acclimation periods will be provided for workers to gradually establish their resistance to heat stress.

Personnel exhibiting symptoms of heat stress (nausea, cramps, dizziness, clammy skin) will be removed from the work area, cooled, fluids will be administered, and the personnel will be observed. Personnel exhibiting symptoms of heat stroke (hot dry skin, mental confusion, unconsciousness) will be immediately cooled and taken to the hospital.

ZCI FIELD PERSONNEL SHOULD NOT ENTER ANY EXCAVATION. ZCI personnel should be aware of the potential hazards associated with unshored excavations, and should not stand on unsupported ground within 5 feet of any unshored or unsloped walls of the excavation.

5.2 POTENTIAL CHEMICAL HAZARDS

Volatile organics and heavy metals are the primary chemicals of concern detected in the sample of soil and sludge.

Field personnel could potentially be exposed to the heavy metals by direct contact with soil, or through inhalation of dusts containing heavy metals. Field personnel could potentially be exposed to volatile organics by direct contact with soil or groundwater.

Field personnel will minimize potential chemical hazards by 1) standing upwind of the work area when possible. 2) avoiding direct contact with soil and groundwater, 3) avoiding generation of dust (visual monitoring), and 4) wearing appropriate personal protective equipment as outlined in Section 6.1. As a general precaution to detect organic vapors, air monitoring to measure organic vapor concentrations in the breathing zone will be performed.

Ingestion of soil and particulate matter containing chemicals is another general exposure route. However, the potential for this type of exposure is minimal during site investigation of the type planned. Safe work practices, including prohibition of eating, drinking, or smoking on site will be enforced at the worksite.

Field personnel will wear coveralls at the site (if required) to minimize contact of clothing with mud and soil potentially containing contaminants. Used and soiled coveralls will be removed and disposed onsite, before leaving the area. Shoes, tools, and hands will be cleaned before leaving the site.

5.3 COMMUNITY HAZARD ANALYSIS

Vapor emissions generated during the proposed field activities are expected to be insignificant. Potential exposure to the surrounding community is unlikely. If significant vapor emissions do occur, the work will be stopped and corrective actions implemented to reduce vapor emissions.

Field personnel will perform air monitoring continuously with a direct reading organic vapor meter (OVM) in the breathing zone at the work location. If OVM readings for a particular work area consistently exceed 5 parts per million (ppm) above background, personnel will withdraw upwind from the work area, if possible, or upgrade to modified Level C protection as outlined in Section 6.1. If OVM readings consistently exceed 10 ppm in the breathing zone while workers are in modified Level C protection, the work will cease and the source of the emission will be identified and controlled before work continues.

6.0 PROTECTIVE ACTIONS

6.1 PERSONAL PROTECTIVE EQUIPMENT

Field personnel will wear equipment to protect against the potential physical and chemical hazards which have been identified herein and those that become apparent in the field. Level D protection will be required at a minimum for field activities at the site. Level D personal protective equipment to be used will include:

- ~Hard Hat
- ~Chemical resistant disposable gloves
- ~Boots, steel toe and shank
- ~Safety glasses and earplugs

Modified Level C protective will be required during collection or handling of soil samples and whenever VOCs are found in the workspace, based on OVM readings. In addition to the Level D protection above, modified Level C protection includes:

-Tyvek coverall

-Respiratory protection consisting of a half-mask purifying respirator with organic and particulate filter cartridges.

The level of protection employed for general site activities by ZCI personnel may be upgraded as deemed necessary by the Site Safety Officer. If significant dust generation occurs or organic vapors are detected. (see Monitoring below), the Site Safety Officer may require modified Level C protection, i.e., donning of respirator.

6.2 SITE CONTROL

Unauthorized and unprotected individuals will be requested to remain out of the area where work is being performed. Specific work zones will not be established for Level D activities at the facility. Work zones, including designation of an exclusion zone, a contamination reduction zone, and a support zone will be established for field activities.

Barricade and secure with caution tape the open excavation. Stockpiled soil will be placed on 6 mil visqueen and covered with same.

6.3 MONITORING

Field personnel will perform air monitoring continuously with a direct reading organic vapor meter (OVM) in the breathing zone at the work location. If OVM readings for a particular work area consistently exceed 5 parts per million (ppm) above background, personnel will withdraw upwind from the work area, if possible, or upgrade to modified Level C protection as outlined in Section 6.1. If OVM readings consistently exceed 10 ppm in the breathing zone while workers are in modified Level C protection, the work will cease and the source of the emission will be identified and controlled before work continues.

7.0 DECONTAMINATION

Minimum decontamination procedures associated with modified Level C protection will be followed and established within the decontamination reduction zone. At the conclusion of each day, disposable gloves and coveralls will be removed and disposed of on-site designated containers. In addition, work boots will be removed and cleaned in a decontamination solution, or, by using a pressurized spray washer prior to leaving the site.

Decontamination procedures for modified Level C protection will be as follows:

Station 1: Equipment Drop - Deposit equipment (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) in a designated area.

Station 2: Boot and Outer Glove Wash and Rinse - Scrub boots and outer gloves with TSP solution. Rinse off using copious amounts of water.

Station 3: Outer Glove Removal - Remove outer gloves and deposit in designated receptacle.

Station 4: Gloves and Outer Garment Removal - Remove Tyveks and inner gloves and deposit in designated containers.

Station 5: Face Piece Removal - Remove facepiece. Avoid excessively touching facepiece with fingers. Dispose of canisters in designated receptacle and wash facepiece in TSP solution.

Station 6: Field Wash - Thoroughly wash hands and face. Shower as soon as possible.

8.0 TRAINING

ZCI personnel participating in field activities will have completed the Hazardous Waste Operations and Emergency Response 40-hour Health and Safety training course (29 CFR 1910.120). Training requirements are discussed in ZCI Corporate Health and Safety Program. Prior to each work day, a meeting will be held at the site to familiarize personnel with health and safety issues, protective equipment, emergency information and supplies, and to discuss special topics.

9.0 MEDICAL MONITORING

ZCI personnel participating in field activities are included in a medical monitoring program. The program includes a baseline physical examination, pulmonary function test, and blood and urine tests. Annual follow-up examinations are included. Details of the medical program are included in ZCI's Corporate Health and Safety Program.

10.0 SITE FACILITIES

The site will be equipped with rest room. Drinking water will also be available.

11.0 EMERGENCY RESPONSE PLAN

The nature of work at the jobsite makes emergencies a continual possibility. The ZCI Site Safety Officer (SSO) will be familiar with emergency procedures and evacuation routes.

If an injury occurs due to an accident, the SSO will be immediately notified so appropriate first aid can begin and medical attention arranged, if necessary. The SSO will investigate the nature and cause of the accident so that work procedures can be modified to minimize the likelihood of the incident's recurrence.

A first aid kit and emergency wash water will be readily available.

Routine and emergency communication will be provided by the mobile telephone. Emergency telephone numbers are given in Table 1. For emergencies not requiring an ambulance, injured personnel will be transported to (see attached map).

Signatures

Site Safety Officer Scott Zaccor (S) Date May 22, 1991

Corporate Safety Supervisor Scott Zaccor (S) Date May 22, 1991

Project Manager Gary Zaccor Date May 22, 1991

**STATE
COMPENSATION
INSURANCE
FUND**

P.O. BOX 807, SAN FRANCISCO, CA 94101-0807

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

MARCH 20, 1991

POLICY NUMBER: 0801858 - 91
CERTIFICATE EXPIRES: 3-15-92

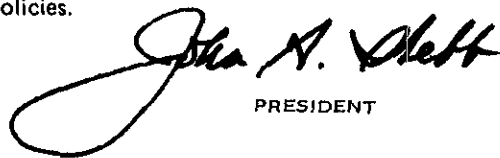
ALAMEDA COUNTY
ATTN ENVIRONMENTAL HEALTH
80 SWAN WAY ROOM 200
OAKLAND
CA 94621

This is to certify that we have issued a valid Workers' Compensation insurance policy in a form approved by the California Insurance Commissioner to the employer named below for the policy period indicated.

This policy is not subject to cancellation by the Fund except upon ³⁰~~ten~~ days' advance written notice to the employer.

We will also give you ³⁰~~ten~~ days' advance notice should this policy be cancelled prior to its normal expiration.

This certificate of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, or condition of any contract or other document with respect to which this certificate of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.


PRESIDENT

ENDORSEMENT #2065 ENTITLED CERTIFICATE HOLDERS' NOTICE EFFECTIVE 03/15/91 IS ATTACHED TO AND FORMS A PART OF THIS POLICY.

EMPLOYER

ZACCOR COMPANIES INC.
791 HAMILTON AVE
MENLO PARK
CA 94025