



**EMCON**

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PROTECTION  
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RO100  
1001 San Pablo, Alb

RO392  
4800 E. 14th, Oak

April 2, 1996  
Project 20805-120.005

Mr. Mike Whelan  
ARCO Products Company  
PO Box 612530  
San Jose, California 95131

Re: Meeting Minutes from ARCO/ACHCSA Status Meeting, October 25, 1995

Dear Mr. Whelan:

The meeting began at 10:00 with introductions and general discussion. Attending the meeting were Barney Chan and Susan Hugo of Alameda County Health Care Services Agency (ACHCSA); Mike Whelan of ARCO Products Company (ARCO); John Young of EMCON; and Kelly Brown of Pacific Environmental Group (PEG).

#### GENERAL TOPICS

The first general topic discussed on the agenda was the ASTM's Risk Based Corrective Action "RBCA". Mr. Whelan asked if ACHCSA has attended any workshops on RBCA and the County's general policy on implementation. Ms. Hugo responded that Kevin Graves of the Regional Water Quality Control Board (RWQCB) recently spoke to the ACHCSA group regarding RBCA and that the group has attended several past talks or workshops. Ms. Hugo stated that if a site passes the Tier 1 criteria (the more conservative numbers) the site could be moved towards closure, or if it failed, the site could be evaluated against the Tier 2 criteria or cleaned to meet the Tier 1 criteria. Mr. Chan stated that he already uses the Risk Based Screening Level tables to evaluate sites with dissolved groundwater plumes. It was noted that the several ACHCSA regulators are very receptive to the RBCA approach.

The next topic on the agenda was the State Water Resources Control Board (SWRCB) Resolution 92-49 "Containment Zones" (formerly non-attainment zone). Both Ms. Hugo and Mr. Chan stated that containment zones would typically be implemented on larger sites, such as terminals, industrial areas with commingled plumes and not your standard retail gas station sites. Mr. Whelan stated that ARCO would implement long term verification monitoring instead of formal containment zones and Mr. Chan and Ms. Hugo thought that would be acceptable.



The next general topic was quarterly reporting. Ms. Hugo and Mr. Chan inquired about the frequency and rationale for sampling every well each quarter. Mr. Whelan said a table would be presented to Ms. Hugo with the minutes from the previous ACHCSA meeting that would explain the schedule and rationale for reduced groundwater sampling. Mr. Young and Mr. Whelan briefly discussed the changes that would be made to the upcoming quarterly reports. Mr. Young said that the historical tables and text would be reduced on three of the four quarters to reduce the size and repetitive information presented in each report.

The last general topic on the agenda was the ACHCSA's general approach towards closure. Mr. Chan said it was site specific, on a case by case basis. Once the ACHCSA decides that a site should be closed, a case closure summary form is completed and is submitted to the RWQCB for review and concurrence. Mr. Chan stated that once a site is closed the agency has no authority to review closer reports based on an administrative and financial rule. Additionally, if wells are to be decommissioned, it is at the discretion of the RP.

#### **SITE STATUS**

Mr. Brown began by discussing the status of ARCO stations #2107 and #4494. Minutes for these sites were submitted by Mr. Brown under separate cover.

#2035, 1001 San Pablo Avenue, Albany

Ms. Hugo stated that she is the case worker for the Shell station located across Marin Avenue, while Mr. Chan handles the ARCO site. Ms. Hugo said that Shell had some concern regarding the observed floating in their off-site well S-5. A Shell site plan was spread out displaying the location of the Shell well in regards to the ARCO site. Ms. Hugo asked if ARCO and Shell had a working relationship. Mr. Whelan stated that they would be willing to work with Shell. Mr. Young asked Ms. Hugo if she could contact Shell and see if EMCON could access their well. Ms. Hugo said she would ask Shell Oil.

Mr. Young displayed a site plan and explained the historic source removal performed at the site. The UST's were removed in July/August 1991. Approximately 350 cubic yards were excavated from around the former tank complex and pump islands and disposed of off-site. Mr. Chan said the treatment system has not operated much since startup. Mr. Young agreed and stated that groundwater elevations came up in the winter and spring of 1994 and submerged the vapor wells, in addition, the East Bay Municipal Utility District (EBMUD) required EMCON to shut down the treatment system after EMCON reported

that Arsenic concentrations were above discharge limits. EMCON requested a variance from the EBMUD and received an increased discharged limit after several months of down time.

Mr. Young continued with a review of the system performance. In July, 1995, after groundwater elevations decreased, the vapor flow the wells was increased to 80 scfm from 20 scfm. Based on recent laboratory analysis for TPHg concentrations in air, the treatment system is removing approximately 22 lb. per day and roughly 600 lb. a month. Mr. Young explained that the treatment system has a radius of influence (ROI) of approximately 20 to 28 feet, depending on the well. Mr. Young added that based on the ROI the treatment system may be removing hydrocarbons from the street where Shell well S-5 is located. Mr. Young and Mr. Whelan again asked Ms. Hugo if she may contact Shell Oil to verify if ARCO could have access to their well to measure depth to water. Mr. Young proceeded to describe the groundwater treatment system, explaining the pumping rate from RW-1 is 1.5 to 2 gpm, and drawdown has been observed in the well to be approximately 11 to 12 feet. Based on the capture from the pumping test calculations the radius of influence would encompass the entire site. Mr. Young continued by reiterating that this is the most optimum time to remediate soils as groundwater is typically at it lowest levels during the year. In addition, Mr. Young said the system is designed to allow for the bubbling of air in extraction well RW-1 if any sheen or free product is detected. Mr. Chan asked if the air sparge system is running. Mr. Young said it is currently not running as we are still evaluating the SVE data and are waiting to see a drop off in the influent concentrations before turning on the air sparge system. EMCON will continue to optimize the systems performance over the next six months.

#2185, 9800 East 14th Street, Oakland

Mr. Young started by displaying a site plan and discussing the removal of the UST's and piping in October and November 1991. Approximately 1050 cubic yards of soil and 10,000 gallons of groundwater were removed from the site. Mr. Young informed Mr. Chan that off-site wells MW-9 and MW-10 were installed. The results of laboratory analysis of soil and groundwater sampling indicated no detectable gasoline hydrocarbons. A report documenting the results will be submitted the beginning of November 1995. Mr. Young the provided a chromatograph of the groundwater laboratory analysis for off-site well MW-7. The chromatograph indicated three compounds eluting in the gasoline range, PCE, TCE and DCE. The chromatographs for the on-site wells did not indicate the presence of any chlorinated compounds. Mr. Young said the results would be incorporated into the third quarter monitoring report.

A site map of the groundwater concentrations was displayed to Ms. Hugo and Mr. Chan. Mr. Young explained the laboratory results from the second quarter indicated a continued decrease in dissolved gasoline concentrations. Mr. Young and Mr. Whelan then presented the preliminary results of sampling for various bioremediation parameters. The results appear to collaborate with the trends seen in groundwater concentrations.

Mr. Young and Mr. Whelan than recapped what has happened at the site, the site appears to have limited risk based on the following: source removed, no free phase hydrocarbons, no migration, dissolved concentrations are decreasing and future land use indicates that the site will stay paved as ARCO is the owner.

Mr. Young then reviewed the future groundwater sampling schedule with Mr. Chan and Ms. Hugo. (see attached table).

#0276, 10600 MacArthur Boulevard, Oakland

Mr. Young began by discussing the second quarter groundwater monitoring map. The map displayed the concentrations of TPHG and benzene in groundwater in shallow zone wells MW-2 and MW-7. The deeper zoned wells continued to be non detect for gasoline. Mr. Whelan and Mr. Young noted that the concentrations of dissolved gasoline in wells MW-2 and MW-7 has declined with time. In addition, the composition of the gasoline has degraded to heavier end compounds. Mr. Young explained that the reasons for the decrease in lighter end compounds (benzene) is due to the remediation system ARCO has installed on-site and off-site, source removal and intrinsic biodegradation. Mr. Chan asked if ARCO could measure depth to water and collect groundwater samples from the vapor wells. Mr. Whelan stated that they have measured depth to water in the past to confirm flow direction in the shallow or perched zone. Mr. Young said that water is not currently present in the vapor wells but if it does reappear, EMCON would collect data measurements.

Mr. Young displayed a site plan of the PCE concentrations detected in groundwater monitoring wells. The shallow zoned monitoring wells continued to be non-detectable for PCE. The deeper zoned wells ranged from ND in MW-8 to 3,100 ppb in MW-4. Mr. Young explained that the concentrations appear to be consistent with past events. Mr. Young brought up the fact that the groundwater flow direction and concentration gradient for the entire regional area has not been evaluated due to a lack of site investigation and sampling data from wells on Drake Builders property. Mr. Chan stated that Drake is currently excavating soils in and around Young's Dry Cleaners. Mr. Whelan asked if ACHCSA has received any reports documenting the field work performed in March 1995. Mr. Chan said he has not received any reports. Mr. Chan stated that he thought Augeas

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Consulting might not be the environmental consultant for the site as All Environmental of San Ramon, CA is performing the excavation work. Mr. Whelan stated that All Environmental might be a subcontractor to Augeas. Mr. Whelan said that ARCO received a letter from Garrison Law firm stating that ACHCSA had given Drake Builders the approval to excavate soils in the immediate vicinity of the ARCO site. Mr. Chan stated that he approved All Environmental to perform the work outlined in Augeas workplan. The workplan called for the excavation of soils in the vicinity of Young's cleaners and not near the ARCO site.

Mr. Chan asked if the SVE system is running. Mr. Young said the system is currently down as the influent concentrations were below the method reporting limit. Mr. Young stated that EMCON is evaluating the SVE system to determine the feasibility of continued operation with the current abatement unit. Mr. Young said to date the system has removed approximately 7710 lb. of gasoline, with 3940 lb. coming from the off-site well field.

Mr. Chan asked if ARCO still wants to enhance its off-site system. Mr. Whelan said he does not expect to at this time. Mr. Whelan stated that based on the detection of compounds not related to the ARCO facility being identified in soils and groundwater in the immediate off-site area, and the continued decrease in gasoline concentrations, ARCO does not expect to install an enhanced off-site well field. Mr. Young said EMCON will continue to pulse the current system if hydrocarbons in vapor are present. Mr. Whelan said ARCO is expected to pursue a long term monitoring program at the site or evaluate RBCA.

Sincerely,

EMCON



John C. Young  
Project Manager

Attachments: Table 1

cc: ~~Mr. Barney Chan, ACHCSA~~  
Ms. Susan Hugo, ACHCSA

**Table 1**  
**Sampling Schedule**

ARCO Site Number/ Address	Well ID	Chemical History	Location Relative to Plume	Proposed Sampling Schedule
2185 9800 14th St. Oakland	MW-1	11 consecutive quarters of ND	Up-gradient well	Annual (1st quarter)
	MW-2	Contains TPHG/ BTEX	Within	Quarterly
	MW-3	Contains TPHG/ BTEX	Within	Quarterly
	MW-4	11 consecutive quarters of ND	Outside southern edge	Annual (1st quarter)
	MW-5	Contains TPHG/ BTEX	Within	Semiannual (1st & 3rd quarters)
	MW-6	Contains TPHG/ BTEX	Within	Semiannual (1st & 3rd quarters)
	MW-7	Contains non-typical gasoline	Down-gradient well	Quarterly
	MW-8	Contains TPHG/ BTEX	Within	Quarterly
	MW-9	1 quarter of ND	Down-gradient well	Quarterly for two more ND events, then annual
	MW-10	1 quarter of ND	Cross-gradient well	Quarterly for two more ND events, then annual
2035 1001 San Pablo Albany	MW-1	Contains TPHG/ BTEX	Within	Quarterly
	MW-2	12 consecutive quarters of ND	Below leading edge	Semiannual (1st & 3rd quarters)
	MW-3	Contains TPHG/ BTEX	Within	Quarterly
	MW-4	Has contained TPHG/ BTEX	Southern edge	Annual
	MW-5	9 consecutive quarters of ND	Up-gradient well	Annual (1st quarter)
	MW-6	9 consecutive quarters of ND	Outside southwest edge	Annual (1st quarter)
	RW-1	Contains TPHG/ BTEX	Within	Quarterly
276 10600 MacArthur Blvd. Oakland		No changes proposed for '96		