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July 3, 1992

Mr. Richard Hiett
California Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

Subject: Minutes of Meeting on June 11, 1992 at the Regional Water Quality Control Board (RWQCB) to discuss work progress at ARCO Stations which are under the jurisdiction of Mr. Richard Hiett of the RWQCB.

Mr. Hiett:

I would like to thank you and the people from the Alameda County Health Care Services Agency (ACHCSA) for agreeing to meet with ARCO and our consultants concerning ARCO sites within your regulatory jurisdiction located within Alameda County, California. This letter is our understanding of the status and schedules for the sites which were discussed. If you should notice any discrepancies from your understanding of the status or schedule of these sites noted, please notify ARCO. This letter is a brief overview of a meeting held at the RWQCB in Oakland, California at 2:00 pm on Thursday, June 11, 1992 concerning work progress and plans for future work at ARCO Stations in Alameda County, California which are currently under the regulatory jurisdiction of Mr. Richard Hiett of the RWQCB. Attending the meeting were Mr. Richard Hiett and Mr. Lester Feldman of the RWQCB; Ms. Susan Hugo, Mr. Scott Seery, Mr. Ed Howell, Ms. Juliet Shin, and Mr. Barney Chan of the Alameda County Health Care Services Agency (ACHCSA); Mr. Michael Whelan of ARCO Products Company (ARCO); Mr. John Vargas and Ms. Diane Lundquist of GeoStratagies Inc.; and, Ms. Valli Voruganti and Mr. Joel Coffman of RESNA Industries.

The meeting was held at the request of ARCO to introduce Mr. Michael Whelan as the acting environmental engineer overseeing ARCO sites in Alameda County, California and to provide the RWQCB and the ACHCSA a brief overview of work being performed at the subject sites.

An agenda for the meeting had previously been sent to Ms. Susan Hugo of the ACHCSA for distribution among the various caseworkers within her agency. The following is an overview of the agenda and items for discussion:

ARCO Station	Address & City
276	10600 MacArthur Blvd., Oakland
374	6407 Telegraph Ave., Oakland
414	3000 Shattuck Ave., Berkeley
2035	1001 San Pablo Ave., Albany
2107	3310 Park Blvd., Oakland
2152	22141 Center St., Castro Valley
2169	899 W. Grand Ave., Oakland
2185	9800 E. 14th St., Oakland
4494	566 Hegenberger Rd., Oakland
4931	731 W. MacArthur, Oakland
6041	7249 Village Parkway, Dublin
6148	5131 Shattuck Ave., Oakland

Topics for discussion to include:

- Permitting and Access Problems, including City of Oakland
- Anticipated Remediation Schedules
- Plan of Action to Complete Delineation of Site
- Possible/Probable Contributing Offsite Polluters, Help in gaining access/cooperation/information from them
- Quicker approval of addendums to work plans, may we proceed without approval in cases where additional monitoring wells are being added to a monitoring program?

The meeting convened at 2: 00 pm on June 11, 1992 and upon completion of introductions, Mr. Ed Howell indicated that the ACHCSA was the oversight agency for all of Alameda County with exception to the cities of Berkeley, San Leandro, Hayward, Fremont, Newark, Union City, and Pleasanton. The Alameda County Water District (ACWD) has oversight in Fremont, Newark, and Union City, California. Currently, the ACHCSA is negotiating with the cities of Berkeley and San Leandro to allow ACHCSA oversight of sites within their cities. Mr. Hiett explained that he was the RWQCB engineer for sites in Alameda County which include all sites with exception of the cities which regulate themselves (referenced above) and the city of Livermore. He explained that John Jang was the RWQCB engineer with responsibility for the self regulated cities of Berkeley and San Leandro and that Eddy So has responsibilities for the sites within the cities of Livermore and Hayward and the cities within the ACWD. Mr. Barney Chan of the ACHCSA is now in charge of overseeing sites for the ACHCSA which were previously under the direction of Mr. Paul Smith and Mr. Larry Seto of the ACHCSA. These sites include ARCO Stations 276 and 2107 in Oakland, California and ARCO Station 2035 in Albany, California.

Mr. Whelan explained that ARCO's general approach to investigation consists of multiple phases of work, often being performed simultaneously. To expedite the processes involved in delineating and remediating a site, ARCO often will gather results from a subsurface investigation, vapor extraction test, or aquifer test and pass the information to engineers so remedial system design can begin before formally finalizing the reports. To further expedite the process, ARCO requested for the ACHCSA to speed up their review of work plans and remedial action plans. Mr. Whelan also explained that often during tank removal and replacement activities, ARCO installs several types of piping in trenches across the site which can later be used in various types of remediation systems. This piping is designed to accommodate electrical and air lines for pumps, groundwater extraction and soil vapor extraction. This approach minimizes disruption at the site during future installation of various remediation systems.

Site specific items of discussion were as follows:

Station 276, 10600 Mac Arthur Blvd., Oakland, California

Mr. Chan raised several concerns related to Station 276 including a desire for the groundwater gradient of the shallow perched water-bearing zone at the site to be established and full delineation of hydrocarbon impacted soil and groundwater at the site. The halogenated volatile organic compounds (VOCs) found in groundwater at the site were also discussed and it was disclosed that ARCO would be installing offsite upgradient wells to determine an offsite source was responsible for VOCs found in groundwater at the site. It

was pointed out that during removal of the waste oil storage tank at the site, there was no evidence of waste oil contamination in soils surrounding the tank and no onsite source for the VOCs. It was also pointed out that the adjacent upgradient property had been an automobile manufacturing plant from circa 1920's to the late 1950's and that operations associated with those activities may be the source of the VOC problem in groundwater at the site.

ARCO stipulated that they do not want to start pumping and treating VOC impacted groundwater at the site until the source of the VOC contamination is identified and the upgradient extent of VOCs in soil and groundwater is delineated. ARCO does not want to clean up groundwater that was impacted by others. Pumping prior to resolution of these matters may actually pull more VOCs onto the site from a probable offsite source. The adjacent upgradient property is listed on the fuel leaks list as Foothill Square Shopping Center. Mr. Richard Gilcrease is the representative of the current property owner, Drake Builders, whom ARCO has been in contact with concerning installation of monitoring wells on the adjacent upgradient property. The last address known for correspondence with Drake Builders is: 5200 Panama Avenue, Richmond, California 94804. Mr. Lester Feldman stated that if the VOC problem is shown to originate from offsite that the RWQCB will pursue the responsible offsite parties for clean up.

The installation of onsite vapor extraction wells and their connection to an existing vapor extraction system at the site was also discussed. At least one of the onsite vapor extraction wells in the southwest corner of the site will be completed as a combination vapor extraction/groundwater monitoring well, if the shallow perched water-bearing zone is not encountered, to help delineate the onsite extent of hydrocarbon impacted groundwater and to provide better groundwater gradient information.

It was explained that ARCO's approach to remediation was to close the site down once and install all necessary and anticipated remediation piping. At this site, it was pointed out that tying into groundwater recovery well RW-1 doesn't imply that ARCO will or is required to remediate the groundwater since the VOCs there probably originate from an offsite source and gasoline hydrocarbons have not impacted groundwater in that portion of the site.

Station 374, 6407 Telegraph Ave., Oakland, California

Discussion about this site with Ms. Susan Hugo of the ACHCSA and Mr. Hiett of the RWQCB included mention of the fact that obtaining encroachment permits from the City of Oakland had been a lengthy, time consuming process which had taken some six months to complete. Mr. Hiett suggested getting names of personnel at the City of Oakland and

that maybe his agency could contact these people to speed up future encroachment permitting. Ms. Hugo was informed that two offsite and downgradient monitoring wells (MW-5 and MW-6) had recently been installed and that soils and groundwater from the borings/wells contained nondetectable levels of gasoline hydrocarbons. A technical report with all field results related to the installation of these offsite wells is being prepared by RESNA.

It was pointed out that a service station located across Telegraph Avenue to the east in the upgradient or cross gradient direction from ARCO Station 374 had been taken out of service during the mid 1980s and that there was a report documenting soil contamination from that site. There is no record in the files that an investigation to determine if groundwater beneath this former service station was impacted by hydrocarbons detected in the soils. This was of concern to ARCO as the onsite monitoring well MW-1, located cross gradient and relatively close to the source area (former tanks) has been consistently free of hydrocarbon impacted groundwater while the onsite monitoring well MW-2, located further from the source and in the upgradient direction from the source at the ARCO site has consistently contained hydrocarbon impacted groundwater. This leads ARCO to believe hydrocarbon impacted groundwater below this portion of the site may originate from the site across Telegraph Avenue to the east.

Ms. Hugo mentioned that an onsite groundwater monitoring well (MW-4) had once contained total petroleum hydrocarbons as diesel. Mr. Whelan pointed out that ARCO had never stored diesel at the site and that weathered gasoline would often show up as diesel on laboratory chromatograms.

In addition, Ms. Hugo gave verbal approval of the Remedial Action Plan for interim soil and groundwater remediation submitted by RESNA on behalf of ARCO.

Station 414, 3000 Shattuck Ave., Berkeley, California

As stated above, sites being discussed in this meeting were those under guidance of Mr. Hiett of the RWQCB. This site is currently under direction of Mr. Jang and therefore was passed over and not discussed in this meeting.

Station 2035, 1001 San Pablo Ave., Albany, California

Mr. Barney Chan of the ACHCSA recently assumed oversight responsibilities for this site from Mr. Larry Seto. He was not completely up to date with previous activities conducted at the site. It was mentioned that the tanks had been replaced during July and August of

1991 and that a subsurface investigation including an aquifer test had been completed at the site. Resna prepared technical reports on behalf of ARCO for the subsurface investigation and the tank replacement. It was also brought to Mr. Chan's attention that a work plan addendum had been prepared by RESNA and delivered to the ACHCSA during May 1992. Mr. Chan said he would review the work plan and get back to ARCO and RESNA with any comments he might have. As of the date of this letter, approval of this work plan addendum has not been received. Additional wells in the vicinity of the new tanks will be proposed under a separate phase of work.

Station 2107, 3310 Park Blvd., Oakland, California

Mr. Barney Chan of the ACHCSA recently assumed oversight responsibilities of this site from Mr. Paul Smith. He was not completely up to date with previous activities conducted at the site. Mr. Joel Coffman and Ms. Valli Voruganti of RESNA explained the proposed groundwater treatment system to be installed at the site along with installation of offsite monitoring wells to delineate the extent of hydrocarbons in groundwater beneath the site. Mr. Chan requested that groundwater from the wells be analyzed for total petroleum hydrocarbons as diesel (TPHd) as TPHd had previously been detected at the site. Mr. Whelan of ARCO explained that ARCO had never stored diesel at the site and that weathered gasoline often showed up on laboratory chromatograms as diesel. It was agreed that downgradient wells will be sampled one time to confirm that TPHd found in the soil was indeed weathered gasoline.

Station 2152, 22141 Center St., Castro Valley, California

Mr. Scott Seery of the ACHCSA was informed that the proposed soil borings (B-19 and B-20) had been drilled and all soil samples collected for analysis from the borings contained nondetectable concentrations of gasoline hydrocarbons, therefore, vapor extraction wells were not constructed in the borings. It was explained by RESNA that the groundwater has only shown trace amounts of hydrocarbon impact on two quarterly monitoring episodes, once each during the spring of 1990 and 1991. All wells have contained nondetectable concentrations of gasoline hydrocarbons since the spring of 1991. Mr. Seery made mention of the fact he had not received a copy of the report related to the soil borings. ARCO and RESNA told Mr. Seery that the report should be issued within 30 days.

It was noted that the Bay Area Air Quality Management District had issued a permit granting RESNA and ARCO the authority to construct a soil vapor extraction system at the site. Progress of obtaining other permits was also discussed.

Station 2169, 899 W. Grand Ave., Oakland, California

Mr. John Vargas discussed the site background for this site. Four monitoring wells and one groundwater extraction well were installed in March 1992 to assess the groundwater conditions at the site. The previous tanks were removed and relocated between February and May, 1992. This work was performed in response to petroleum hydrocarbons identified in a monitoring well adjacent to the previous tank complex. A report of these field activities is in progress and will be submitted to the ACHCSA in July, 1992. In addition, three vapor extraction wells and one groundwater extraction well, located in the new tank complex, were installed on June 8, 1992. A vapor extraction test was performed on June 11, 1992. A report documenting the results of the vapor extraction test and well installations is in preparation.

Ms. Susan Hugo queried how we chose the locations of these wells. Mr. Vargas explained that since petroleum hydrocarbons had impacted onsite groundwater, wells were located at the property boundaries in addition to a well within the previous tank complex. Since petroleum hydrocarbons were identified in an upgradient well, there may be offsite sources. Planned site activities include research for offsite sources, performance of an aquifer test and offsite assessment. Once aquifer characteristics are determined, ARCO will initiate design and permitting of a remediation system.

Station 2185, 9800 E. 14th St., Oakland, California

Mr. Barney Chan discussed how he wanted the subsurface investigation to proceed as he had previously discussed with Mr. Chuck Carmel of ARCO and Mr. Paul Supple of Roux Associates. It was explained that the site was still fenced off and under construction due to a problem encountered by the contractors that performed the tank removal and replacement. Mr. Chan also asked about the subsurface piping that was installed at the site to be used for future remediation. Mr. Whelan explained that piping for remediation purposes was scheduled to be installed at the site, but, due to problems associated with the subcontractor, the piping was not installed and will be installed during the construction phase of any remediation system which may need to built at the site. The tank replacement report was recently submitted to the ACHCSA by Roux Associates.

As documented in a previous letter written to Mr. Barney Chan, it was also discussed with Mr. Chan that ARCO wished to hold off the initiating of obtaining offsite access for installation of offsite monitoring wells at the site until onsite groundwater monitoring wells were installed and monitored to determine the gradient and direction of groundwater flow beneath the site.

Station 4494, 566 Hegenberger Rd., Oakland, California

Mr. Chan expressed concern that although ARCO had submitted a permit application for removal and replacement of the underground storage tanks at the site and that approval for tank replacement had been granted in November 1991, he has still not been given a firm schedule for the replacement of the tanks at the site. Mr. Whelan explained the different responsibilities of the various groups within ARCO and that the ARCO construction department was responsible for the tank replacement scheduling and that he was not involved. However, Mr. Whelan also pointed out that ARCO is in compliance with tank testing requirements and that results of tank and product line leak tests show the tanks and lines are not leaking. The site is on an ARCO tank replacement list, but, the schedule has not been finalized. ARCO will replace the tanks in accordance with deadlines and other requirements as set forth by applicable state guidelines.

It was disclosed that after almost a year of negotiation, an agreement had finally been reached with the adjacent property owner downgradient from the site for installation of offsite groundwater monitoring wells. This work is to be performed in July 1992 along with installation of an additional onsite monitoring well in the northwestern portion of the site.

Station 4931, 731 W. MacArthur, Oakland, California

Mr. John Vargas and Ms. Diane Lundquist discussed the progress at this site since the January 17, 1992 meeting held between ARCO and the ACHCSA. Floating product has been observed in wells A-4 and A-8. A product skimmer will address the floating product in well A-8 until the remedial system is installed. Well A-2, which is adjacent to the former tank complex, was analyzed for oil and grease and lead. These constituents were not identified. The offsite upgradient well and onsite recovery wells were scheduled to be drilled June 12 and 15, 1992. A well located crossgradient to the east of the site is not feasible to install due to access problems.

The tank replacement and relocation project is still in progress. Additional soils were removed from the previous tank complex as requested by the ACHCSA in the January 1992 meeting. Some impacted soil, containing less than 151 parts-per-million hydrocarbons, was left in place due to site constraints (ARCO's facility building and pump islands) which limited the extent of the excavation. A vapor extraction test indicated that vapor extraction is not a feasible option to remediate these areas.

Permits for construction of the remediation system for groundwater discharge have been obtained. The remediation system trenching and construction was scheduled to begin in mid

to late June, 1992. Start-up of the remedial system is scheduled for the third quarter of 1992.

Station 6041, 7249 Village Parkway, Dublin, California

RESNA explained to Mr. Scott Seery that there is a Unocal Station across the street directly west of the ARCO site which has reported significantly higher concentrations of hydrocarbon impacted groundwater. This was pointed out for informational purposes only as RESNA, on behalf of ARCO, is preparing a work plan with proposed work which includes installation of additional monitoring wells, installation of vapor extraction wells, a performance of a vapor extraction test, installation of a groundwater recovery well, and performance of an aquifer pumping and recovery test. This work plan will be submitted to ARCO and the proper regulatory agencies upon completion in July 1992.

Station 6148, 5131 Shattuck Ave., Oakland, California

Ms. Hugo stated she had not received the subsurface investigation report associated with the waste oil investigation at the site. Mr. Whelan explained that ARCO is currently reviewing all the analytical data associated with the investigation and that the report will be issued shortly. ARCO is awaiting backup from the laboratory to complete the review of the analytical data. It was also stated a work plan with proposed additional work at the site is being prepared by RESNA for submittal to ARCO and the proper regulatory agencies in July 1992.

Other Topics for discussion:

- **Permitting and Access Problems, including City of Oakland**

Mr. Hiett asked that if problems are encountered gaining encroachment permits, he be given the names of people at the city in charge of issuing the permits so he may phone them and help expedite the process.

- **Anticipated Remediation Schedules**

ACHCSA asked that any delays which slow down the remediation of sites beyond the schedules which were submitted to the Alameda County District Attorney be carefully documented.

- **Plan of Action to Complete Delineation of Site**

Mr. Whelan explained to the RWQCB and ACHCSA that ARCO is aggressively attempting to fully delineate the onsite and offsite extents of any problems associated with these sites.

- **Possible/Probable Contributing Offsite Polluters, Help in gaining access/cooperation/information from them**

This topic was discussed while reviewing the status of each site.

- **Quicker approval of addendums to work plans, may we proceed without approval in cases where additional monitoring wells are being added to a monitoring program?**

In addressing the request from ARCO for quicker approval of work plans and addendums to work plans, Mr. Chan pointed out that a responsible party does not have to wait for approval of any kind to implement interim remedial measures at a site.

A brief discussion was held about the law under Title 23, Article 11, Chapter 16, Sections 2722 (b)(5) and 2726 (c)(1), which allows for proceeding with proposed work in work plans if not having received approval after 60 days from submittal. Mr. Whelan asked that ARCO be allowed to proceed with proposed work in work plans if the scope of work was the addition of monitoring wells or other work not associated specifically with complex remediation alternatives. Mr. Whelan pointed out that many times in the past work had been significantly delayed due to the time required to obtain work plan approval from the ACHCSA. Mr. Scott Seery asked that ARCO send a note to the ACHCSA requesting work plan review if approval had not been granted when ARCO and it's consultant are ready to implement work or after 45 days from work plan submittal date. This note, with attached figure of proposed well locations, should state that proposed work will proceed if approval has not been granted within the 60 day guideline.

Upon completion of this discussion, the meeting was adjourned at approximately 5:10 pm.

Mr. Richard Hiett
July 3, 1992

If you have any questions or comments about these meeting minutes, please contact me at (415) 571-2449.

Sincerely,

Michael R. Whelan
Environmental Engineer

cc: Lester Feldman, RWQCB
Susan Hugo, ACHCSA
Chris Winsor, ARCO
John Meck, ARCO
John Vargas, GeoStratagies
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