Countywide Services Agency

Environmental Management Department

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September 9, 2010

Charles Hoppin, Chair
c/o Jeanine Townsend
State Water Resources Control Board
1001 I Street
Sacramento, CA 95602

Dear Mr. Hoppin:

SUBJECT: Former Desert Petroleum (Gasco) Station # 758, Marvin Shulman (Petitioner), 505 30th Street, Sacramento.

While we agree that the petroleum plume at this site is well defined, and that further active remediation is not in the best interests of the people of California, the current legal framework appears to be forcing decision makers (the State Water Resources Control Board [SWRCB] in this case) to make vague and unsupported statements regarding many petroleum release sites, such as below:

> "The approximate time period in which the requisite level of water quality for dissolved petroleum hydrocarbons and oxygenate compounds will be met is estimated to be decades to hundreds of years. Though the requisite level of water quality has not been met, water quality objectives will be achieved via natural attenuation in decades to hundreds of years. This is a reasonable period in which to meet the requisite level of water quality because the affected groundwater is not currently being used as a source of drinking water and it is highly unlikely that the affected groundwater will be used as a source of drinking water in the future."

This reasoning by the SWRCB first appears in the *Walker* case decision of 1998. We interpret "decades to hundreds of years" to mean "less than a thousand years". In the present case SWRCB staff say in the *DRAFT UST Case Closure Summary* (page 6) that "residual petroleum hydrocarbons within about 30 feet of the source area will continue to decrease but remain above WQOs for decades to *a hundred years* (emphasis mine). This seems to imply that a quantifiable declining trend has been established and that the WQO will be obtained in 100 years. We assume this is an unfortunate typographical error and that what was meant was "decades to *hundreds* of years". In either case our objection remains the same. No declining trend means there is no possibility of estimating the time required to reach WQOs.

In the Shulman *Case Closure Summary,* much weight is given to the fact that contamination is not detected in off-site monitoring wells, and therefore the site should not be considered in violation of the Basin Plan. This runs counter to your Board's decision in the Lodi Wastewater Treatment Plant case. In that case, the CVRWQCB determined that the point of compliance could be off-site, and that water quality objectives need not be met below the Lodi Wastewater Treatment Plant. Your Board overturned that decision, opining that the point of compliance must be below the site. In *Shulman*, SWRCB staff makes the same argument that your Board overturned in the *Lodi* case, that because off-site monitoring wells are not impacted, the impacted on-site well need not meet WQOs.

It appears to this Agency that the SWRCB has concluded that: (1) the *Shulman* plume is likely to meet water quality objectives (WQOs) in less than a thousand years and (2) this is a reasonable period of time to reach WQOs because the groundwater is unlikely to be used before the end of that time. Concerning the first conclusion, we suspect that the plume will meet WQOs within a thousand years; however, without some means of arriving at that conclusion (i.e. a post-remedial declining trend), this is merely speculative. We see that the residual mass of gasoline hydrocarbons has been estimated to be about 333 pounds and that the TPHg concentration in groundwater was last measured at a 22,000 ug/l (the very same concentration measured one year prior). What are the estimated rates of degradation or attenuation, and how were those arrived at? Does SWRCB expect Regional Boards and Local Agencies to simply make an assumption that plumes of this size or smaller will reach WQOs within a thousand years if there are signs of some attenuation? We note that not all hydrocarbon plumes attenuate. Please refer to the attachment, following, for an example.

Concerning the second conclusion (i.e., that this particular groundwater is unlikely to be used within a thousand years), we believe this is even less supportable than the first conclusion. While we recognize the low yield and low quality of the subject water, the concept that the SWRCB has any idea of the specific waters that will be used in California within a thousand years is inherently flawed. It is problematic enough to make water usage predictions on a general scale over a relatively short period of time, as the authors of the peer-reviewed CALVIN model freely acknowledge. How much more problematic is making predictions for a specific local source over a time frame of "less than a thousand years"? Technological advances and water needs over the next thousand years could reasonably be said to be unfathomable, and may very well make water that is not economically feasible to use now very useable in the distant future.

Thus, the Sacramento County LOP believes it is scientifically unsupportable for SWRCB to conclude that there is substantial likelihood that the plume at 505 30th Street will meet WQOs before the water will be used without providing a scientifically supportable rate of attenuation and without providing more than a speculative opinion about when the potential water source is likely to be used. Furthermore the Sacramento County LOP believes the proposed closure is inconsistent with previous Board decisions (i.e. the Lodi case).

Training provided to Regional Board and Local Agency staff by State Board counsel appeared to affirm that if the time to reach WQOs cannot be projected at a release site, and if the time for use of designated drinking waters at a release site cannot be projected, closing the site is in violation of Basin Plans and the Porter-Cologne Water Quality Control Act. Closing such sites may place some liability on the registered professional taking responsibility for site closure as well as the Agency itself. Therefore, Local Agencies such as ours are reluctant to close sites where there appears to be no legal support for this action.

In closing, if SWRCB believes that impacted groundwaters like the subject case are not worth the cost of protecting at the present time (which is a reasonable opinion) and are unlikely to impact more immediately useable aquifers (also a reasonable opinion), then it seems a better resolution is to de-designate such groundwaters as potential drinking water sources, revise the Porter-Cologne Act, or adopt a formal resolution regarding "low-risk" sites. While this would require more time and effort than administrative solutions, it would avoid relying on logical conundrums, and solve the problem of closing sites where groundwater cannot reasonably be projected to meet WQOs before use.

If you have any questions regarding the above comments, you may contact me by telephone at (916) 875-8506, or by e-mail at marcusb@saccounty.net.

Sincerely,

Barry Marcus

Barry Marcus, P.G.
Supervising Environmental Specialist
Local Oversight Program

Attachment: The Case of 2315 Stockton Boulevard

BIM:CL:se

c: Cori Condon, CVRWQCB (with attachment)

Former Desert Petroleum (Gasco) Station # 758, Marvin Shulman (Petitioner), 505 30th Street, Sacramento

ATTACHMENT
THE CASE OF 2315 STOCKTON BLVD, SACRAMENTO
UCD MEDICAL CENTER SITE

This attachment is included as an example of a petroleum release site where "natural attenuation" does not appear to be occurring, as free product remained after a release documented to have occurred at least 140 years ago.

Background

Site preparation for the construction of the new Surgery & Emergency Services Pavilion (SESP) at UCD Medical Center included the demolition of the former Camellia Cottage. Historical records at the Med Center indicated the cottage was constructed in 1930. Previously, a laundry facility was at the location. The laundry operated from approximately 1850 to 1870, when it burned. The location of the burned structure was reported to have been left undeveloped until construction of the cottage. Nine feet below the cottage, contractors found a 3,000 gallon redwood fuel (bunker?) oil tank (see below). The tank is believed to have held fuel oil for the laundry boilers and therefore is believed to date from circa 1850 to 1870.

On October 28 and 29, 2003, UCD's consultant oversaw the excavation of 1,470 tons of petroleum contaminated soil from below the former redwood tank. During excavation of the fuel-oil tank pit, a thin-walled steel casing was observed within the excavation that was determined to be an abandoned (unused) water supply well. After clearing debris from the well, Nix Well Drilling determined that the well was 65 feet deep, and open-bottomed. After debris was cleared, black viscous oil was found floating on the water within the well at a depth of approximately 37 feet below ground surface. Nix bailed approximately 30 gallons of oil from the well. The oil was stored in a drum and later disposed off-site. See photograph below. Nix subsequently destroyed the well using a cement slurry and explosive charges.