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March 15, 2012

STATE WATER RESOURCES CONTROL BOARD
Attn: Charles R. Hoppin, Chair
1001 I Street
Sacramento, CA 95812-0100

RE: Monitoring Well Retention – Low Threat UST Closure Policy

Dear Mr. Hoppin:

Reference is made to the proposed Low Threat UST Closure Policy and to the section titled Monitoring Well Destruction.

The purpose of this correspondence is to recommend to the SWRCB that, as a reasonable alternative to wholesale Monitoring Well destruction, the SWRCB consider leaving a select number of wells on-site to verify that natural attenuation of residual contamination is actually taking place as projected. Three (3) monitoring wells, sampled annually or bi-annually, may be a workable alternative to provide adequate safeguards to property owners with minimal costs.

Absent a process to verify the natural attenuation rate, the ability to determine if natural attenuation is effective will have been foreclosed.

Exposure to residual contamination in excess of water quality standards for a longer time period will extend uncertainty for legal liability and financial burdens with the onus on property owners, not Responsible Parties, to "prove" when the site meets published compliance standards.

There will be significant indirect impacts socially, economically and cumulatively to the property owners and to the community caused by the SWRCB decision to alter current environmental practices and to destroy all wells.

RELEVANT SWRCB PUBLICATIONS

In order to examine this issue, two publications issued by the State Water Resources Control Board have been reviewed.

January 31, 2012 DRAFT of the Low-Threat UST Closure Policy ("Policy")

DRAFT Substitute Environmental Document ("SED")

As presently written in the proposed Policy, “All wells and borings installed for the purpose of investigating, remediating, or monitoring the unauthorized release shall be properly destroyed prior to case closure unless a property owner certifies that they will keep and maintain the wells or borings in accordance with applicable local or state requirements.” There are two objections to this practice.

1) As stated in the SED, the Cal Codes Regs, tit. 23, 2722, subd (a), identifies the components of corrective action to include **verification monitoring**. There is no provision for verification monitoring in the proposed Policy.

The SED references Resolution 92-49 in a discussion on best water quality that states, in part, “Any alternate level of water quality less stringent that background water quality must … not result in water quality less than the prescribed water quality control plan for the basin within which the site is located.” Further, “Resolution 92-49 does not require that the requisite water quality be met at the time of case closure; it specifies compliance with cleanup goals and objectives within a reasonable time frame.” There is no definition of “reasonable time”.

The SED states, in part, “Agencies qualifying for such exemptions must still comply with CEQA goals and requirements including the requirement to avoid significant adverse effects on the environment where feasible. Agencies must also evaluate environmental effects, including cumulative effects … and provide **mitigation monitoring**.”

SED section 18 Mandatory Findings of Significance, “Redevelopment” stated that “Many petroleum-impacted sites that are subject to the proposed Policy are developed parcels of land, so closure of cases on these sites will not lead to redevelopment.” This is flawed. First, the number of service station sites has decreased significantly over time. Statistics from the U.S. Census Bureau Indicate that between 1999 and 2009 the number of California service stations declined from 8937 to 7420; a 17 % decrease. Second, the existence of residual contamination can limit the opportunities for redevelopment.

2) Additionally, the Policy is limited to sites that are in the monitoring phase. This will “cause regulatory agencies to close cases with more petroleum left in place than with current practices.” “This would cause petroleum to remain in the subsurface subject to natural attenuation processes for a longer period of time.”

Surprisingly, the shift to an emphasis on natural attenuation is coupled with a Policy to destroy all monitoring wells, which forecloses any possibility of determining whether the natural attenuation rate is occurring at projected levels, whether subsurface conditions have deteriorated, or whether the plume has migrated under adjacent sites.

The result in the implementation of this Policy is to increase the time frame for property owners to obtain closure; not only environmental closure, but closure of liability and financial burdens.

As drafted, the burden to maintain the wells is upon the property owner to take affirmative action to retain a monitoring well according to local and state requirements. The burden to maintain the wells should be placed upon the Responsible Party, as identified by the governmental agency having jurisdiction over the property in question.

As drafted, uncertainty remains for an extended period of time that will limit the rights of a property owner to enjoy a full range of normal property rights. Gone is the ability to install an on- site groundwater well, construct subterranean parking or storage, or re-contour the site for

construction. The uncertainty limits the ability to develop, sell, lease, and/or finance the property.

If a prospective purchaser has two choices to select a “clean” site or to select a site with “residual contamination”, it is not too much of a stretch to predict which site the purchaser will choose. The alternative is for the purchaser to offer a lower price for the contaminated site.

SCIENTIFIC PEER REVIEW

The “sound science” discussion by the Peer Review participants presented scientific issues that require review by the SWRCB prior to adoption of the Policy. The relevant issues and the authors are identified below.

Dr. Pedro J. Alvarez:

1) “The Policy should explicitly recognize that biodegradation of vapors in the unsaturated zone significantly depends on moisture content.”

2) “In principle, I agree that stable or shrinking plumes tend to be low risk, but there should be some minimum data requirements (e.g., number of monitoring wells and time span considered for data analysis) to reliably establish that the plumes are indeed stable or shrinking.”

3) “The technical arguments are often based upon conference papers and other literature that has not been vigorously peer-reviewed.”

4) Howard (1990) statements regarding biodegradation/natural attenuation warranted the evaluation “This is not an authoritative literature source.” Further, “Note that there is still significant debate on the significance of the reported MTBE biodegradation rates.”

5) Dr. Alvarez also raised an issue regarding the possibility of a MTBE plume “detaches from the source”.

Dr. Elizabeth A. Edwards:

1) “The ability to clearly and sufficiently accurately delineate a given plume, with appropriate measurement and sampling strategy, is absolutely key.”

2) Dr. Edwards referenced “challenges related to heterogeneity and seasonal variations (e.g., such as changes in water table depth and flow patterns)”.

3) “Biodegradation constants are also a strong function of temperature.”

4) “Another comment would be to consider the effect of soil moisture. Biodegradation only occurs if there is sufficient moisture in the soil.”

5) In a comment related to the 30-ft exclusion distance in Assertion 5, “However, another way to look at the modeling would be determine what biodegradation rate you would need to achieve the desired attenuation in the given scenarios.”

Dr. Mark A. Widdowson and Dr. John C Little

1) However, the impact of site-specific parameters that could influence results is not always captured by this type of study.

2) Potential concerns related to Assertions 5 through 7 include:

a) Static water table – elevations subject to increases and decreases,

b) Barriers to oxygen exchange – asphalt and concrete result in less oxygen replenishment, and

c) Soil Properties – soil porosity and moisture content factors.

3) "It is recommended to incorporate technical guidance on … methods to verify benzene bioattenuation."

4) "Significant attenuation is observed when the petroleum contaminant source has 2 to 10 feet of clean overlying soil."

Dr. Robert C. Spear:

"The secondary evidence for the processes of stabilization and reduction in concentration in individual monitoring wells includes indicator parameters of bioremediation and quantitative estimates of attenuation rates based upon chemical analysis of dissolved species over time."

REASONABLE ALTERNATIVES

The SWRCB is obligated to examine reasonable alternatives; in this case, an alternative to destroying all monitoring wells.

There is a solution that will not break the bank. Retain a limited number of monitoring wells, perhaps as low as three (3) monitoring wells, to measure whether natural attenuation is actually occurring. This is far less costly that forcing a property owner to pursue litigation or to absorb the cost of reinstalling monitoring wells to "prove" to a prospective purchaser or a lender that residual contamination has truly been naturally attenuated.

When measured against the stated environmental impacts associated with continued monitored of site conditions such as waste disposal, greenhouse gas emissions due to traveling to and from the site, and traffic disruptions; the prospect of <u>diminution of property values, future litigation, increased costs of financing, loss of potential clients, or future reinstallation of monitoring wells</u> need to be balanced against any contemporary perceived savings. The UST Cleanup Fund may benefit from improved efficiency; however, the cost to property owners will increase. The Policy shifts the burden to property owners.

Concerns that a monitoring well could impact a deeper aquifer are statistically minimal. Selected monitoring wells under the retention scenario could be carefully designated taking into account any threats to a deeper aquifer. Given the Policy that states the levels of residual contamination are not significant and that the plume must be "stable" or "decreasing", the impact to a deeper aquifer, like all other environmental elements under review, must be weighed against the alternative social, economic, and cumulative indirect costs to a property owner. After all is said, economic resources available for environmental restoration are limited to the property owner as well as the UST Cleanup Fund.

RECOMMENDATION

The recommendation of this memorandum is to allow a limited number of monitoring wells to be left on site in order to verify the rate of natural attenuation of on-site residual contamination that remains in excess of water quality standards. To be specific, based upon site conditions, three (3) wells would be a "target" standard for Responsible Parties and governmental agencies having jurisdiction to agree upon retention of monitoring wells. The frequency of such monitoring could be extended to annual or bi-annual monitoring. An indirect benefit is that a property owner could, if circumstances necessitated, such as a real estate or financial transaction, elect to perform groundwater sampling independent of the Responsible Party.

I thank you your time to review my comments. Should you wish to follow up on these concepts, please feel free to contact me at 805-493-0746 or lsturner@verizon.net.

Larry S. Turner, J.D., M.B.A.

Cc: Frances Spivey-Weber, Vice Chair
Tam M. Doduc, Member
Thomas Howard, Executive Director
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STATE WATER RESOURCES CONTROL BOARD
Attn: Charles R. Hoppin, Chair
1001 I Street
Sacramento, CA 95812-0100

RE: Low Threat UST - Gold Standard case closure or Provisional case closure?

Dear Mr. Hoppin:

I have previously written to the SWRCB to express my concerns in regards to the detrimental effects of the proposed Low Threat UST Closure Policy ("Policy") on the rights of the affected Real Property Stakeholders. Historical safeguards are soon to disappear.

SECOND-CLASS CLOSURES

The Policy, if adopted as proposed, will create a two tiered case closure system.

1) The traditional classification is the "**Gold Standard**" case closure as documented by an unfettered No Further Action Letter.

2) The second, or brand new, classification would be the "**Provisional**" case closure in which residual contamination is left in place to supposedly naturally attenuate as documented by some form of notification to "land use" agencies. This secondary class, under certain circumstances, includes a recorded Deed Restriction.

RECOMMENDATIONS

The creation of this second-class "**Provisional**" closure is problematic for the Real Property Stakeholders. My intent is to suggest reasonable "Alternatives" to certain aspects of the proposed Policy, as seen through the eyes of Real Property Stakeholders in order to mitigate some of the adverse effects of the second-class closure. The suggestions are as follows:

1) <u>Retain a limited, reasonable number of groundwater monitoring wells to verify the natural attenuation rate of the residual contamination</u>. For example, three (3) monitoring wells could be sampled every two (2) years for verification purposes. The

balance of the monitoring wells could be decommissioned. This will lead to a No Further Action letter without land use limitations. This mitigation measure will allow verification monitoring of the rate of natural attenuation without undue reimbursements from the USTCF. It is a scenario where both economic and environmental considerations are balanced.

2) In the event a land use limitation and/or restriction is imposed as a condition of Low Threat UST Closure, there should be a fixed, reasonable "expiration" date included in the document. For example, if a plume is truly "stable" and "decreasing", five (5) years should be the maximum time frame to be subjected to a Provisional closure. This will limit the "period of impairment". It will reduce and/or eliminate restrictions and/or limitations of property rights.

3) Establish a cost-effective process of appeal for a Property Owner to request a case closure without limitations. This may serve to limit the need for costly litigation and recognize the fact that limitations can sometimes be erroneously imposed on sites.

4) To facilitate future inquiries, the Primary Responsible Party, should be required to register on GeoTracker to enable future interested parties access to discuss the history of a given site or to request information on the site. Absent a contact agent, a Property Owner, innocent adjacent Property Owner, lender, governmental agencies or interested parties would be forced to expend resources to find the Primary Responsible Party. A "tracking system" for Responsible Parties is only fair in the event unacceptable levels of contamination sourced with the Responsible Party is discovered in the future.

PROJECT DESCRIPTION ISSUES

As stated in the proposed Policy, the SWRCB intends "to provide direction to responsible parties, their service providers, and regulatory agencies." Absent from the discussion are entire classes of Property Owners, who will be described below. CEQA, section 15064 (c) states "In determining whether an effect will be adverse or beneficial, the lead agency shall consider the views held by **members of the public in all areas affected** as expressed in the whole record before the lead agency."

CURRENT CASE CLOSURE PROCEDURES

After appropriate investigation, remediation, and monitoring, a Primary Responsible Party can be expected to request a case closure based upon a history of the site that documents the then existing contamination levels as measured against published scientific standards. If the governmental agency having environmental jurisdiction concurs, the site is issued a No Further Action letter that is widely recognized by the community and is accepted as the **Gold Standard** that the site is environmentally in compliance with the published standards. This

enables a Property Owner to sell/lease, develop/redevelop, or finance/refinance the Premises without facing any form of "stigma" from the historical contamination.

PROPOSED CASE CLOSURE PROCEDURES

Under the proposed Low Threat UST Closure Policy, there will be residual contamination left in place to naturally attenuate. This creates a secondary classification, or **Provisional** classification, of case closure in that unverifiable contamination, potentially in excess of existing water quality standards, is left in place.

In the event all monitoring wells are destroyed, there is no way to verify if or when the contamination actually naturally attenuates. As such, there will be a "stigma" attached to the Premises based upon notification to land use governmental agencies that will "flag" the Premises in the event of future activity. Will the planning department or building department impose arbitrary conditions, particularly in the form of a Conditional Use Permit, to enable a Property Owner to develop his site? Will a lender offer the same terms and conditions to a Property Owner with residual contamination or will the lender extract a high rate of interest or tighter terms and conditions in order to approve the financing? It is common sense that a proposed purchaser, given a "clean property" or a "property with a stigma" will not pay the same price for both properties. This is, in the real estate community, described as diminution of value.

The land use limitations could include a Deed Restriction, which, once recorded, may not easily be removed from the public record absent a fixed expiration date. Given the potentially long term projections for natural attenuation, the Property Owner will be faced with the difficult task of identifying and negotiating with a governmental agency with authority to execute a recordable document to extinguish the land use limitation or Deed Restriction.

It should be acknowledged that there is a significant cost factor to the Real Property Stakeholder to impose either engineering controls (short term out of pocket costs such as a vapor barrier) or institutional controls (long term costs such as diminution of value and loss or limitation of property rights).

VERIFICATION MONITORING

There will be no practical way for a Property Owner to verify the end of the contamination cycle. It shifts the burden form a Primary Responsible Party of the Property Owner, to include Innocent Adjacent Property Owners, to "prove" their Premises is no longer contaminated in excess of the then existing governmental standards. Proving that acceptable levels of contamination are present at some future undetermined point in time may be extremely hard to achieve. The Primary Responsible Party may be long gone or is claiming limited or contractual protections from liability. This is particularly true when such historical retail brands such as Texaco, Unocal, Amoco, ARCO, Phillips 66, and Sunoco have been acquired by other players in the gasoline business. It is not too much of a reach to project that a Property Owner

may have to resort to litigation to obtain a reasonable remedy to the issue of lifting land use restrictions.

Interestingly, Dr. Elizabeth A. Edwards, a member of the scientific Peer Review panel, opined "The ability to clearly and sufficiently accurately delineate a given plume, with appropriate measurement and sampling strategy, is absolutely key."

The task of proving future levels of contamination absent verification monitoring wells becomes even more daunting if we consider the potential for the composition of motor fuels to change over time and/or the potential that governmental standards become more restrictive.

REAL PROPERTY STAKEHOLDERS

There are different circumstances associated with the term "Property Owner"; i.e., there are different classifications of Real Property Stakeholders.

NOTE: A careful distinction needs to be made between a "Responsible Party" and a "Property Owner". They are not necessarily one and the same.

1) There is the Property Owner who owns the land and owns/operates underground storage tanks ("UST") as part of his/her business. This group of Property Owners is often represented by sole proprietorships of service station Dealers who purchased their sites from a major oil company. In many cases, there exists a contractual relationship whereby the Primary Responsible Party, the major oil company, has shifted the burden of responsibility to the Property Owner as a condition of the sale of the Premises to the Dealer. In the alternative, the responsibility of the Primary Responsible Party has been significantly limited. This creates a de facto, contractual, non-governmental, Secondary Responsible Party, who may or may not have the financial ability to fund a UST cleanup. In the event a Secondary Responsible Party is unable to affect the UST Cleanup, bankruptcy and/or abandonment is the ultimate consequence of the shift of the burden.

2) There is the more traditional Property Owner that has held the Premises in the family for generations and leased the Premises to a major oil company, who, in turn, owned and operated the UST. In certain of these cases, particularly older Leases, there was no written provision for environmental liability. Despite the lack of written obligations, the collective system of governmental oversight served to identify Primary Responsible Parties to effectuate corrective action for contaminated sites.

3) There is the Innocent Adjacent Property Owner, who is simply unlucky enough to own downgradient Premises contaminated by a plume originating from another site. Absent any form of obligation with the Primary Responsible Party, the Innocent Adjacent Property Owner is dependent upon appropriate governmental oversight or the Superior Court for a remedy to contamination totally unrelated to their ownership of their Premises. Property rights are

limited by the inability to perform tasks such as development (such as construction of subterranean parking or storage) or utility (such as installing a private water well).

NOTE: The SED report, on page 39 in the section on Redevelopment, stated that "Many petroleum-impacted UST sites that are subject to the proposed Policy are developed parcels of land, so closure of cases on these sites will not lead to redevelopment." Unfortunately, after decades in the sale and leasing of service station properties, I can state with certainty that this is an incorrect statement. The number of "prime" real estate parcels that are converted to non-service station use is dramatic. The number has fallen from approximately 9,000 stations in 2000 to 7,500 stations in 2010. This represents that 1 out of 6 stations are now used for some other use; i.e., they have been redeveloped and would likely be redeveloped at a higher rate absent the "stigma" of residual contamination.

CEQA/STATUTORY COMPLIANCE CONCERNS

The "improved efficiency" of the UST Cleanup Fund administration, while an important and urgent goal of the SWRCB, does not consider the consequences of the proposed Policy in the secondary indirect physical economic and social impacts to property owners. As defined in CEQA 15064 (e), "Economic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment."

In addition, the proposed Policy does not address the "cumulative effects" under CEQA 15064 (h) (1). "When assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable."

Next, 23 CCR, 3777, subd. (b)(3) requires "an analysis of reasonable alternatives to the project and mitigation measures to avoid or reduce any significant or potentially significant adverse environmental impacts."

CONCLUSION

I urge the SWRCB to ensure balance between the needs of the UST Cleanup Fund and the needs of the stakeholders served by the UST Cleanup Fund.

The recommendations offered are common sense mitigation measures.

I thank you your time to review my comments. Should you wish to follow up on these concepts, please feel free to contact me at 805-493-0746 or lsturner@verizon.net.

Larry S. Turner, J.D., M.B.A.

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