

BEFORE THE STATE WATER RESOURCES CONTROL BOARD

In the Matter of the California Regional Water)
Quality Control Board – Los Angeles Region.)
Amendment to Revised Cleanup and Abatement)
Order that Impose Cleanup Goals for Soil and)
Groundwater – Former GATX Los Angeles)
Marine Terminal, Port of Los Angeles, Berths)
171 through 173, Wilmington, CA)

**PETITION FOR REVIEW AND
REQUEST FOR STAY**

Pursuant to Section 13320 of the California Water Code and Section 2050 of Title 23 of the California Code of Regulations (“CCR”), petitioners Kinder Morgan, Inc., Kinder Morgan Energy Partners, L.P., and Kinder Morgan Liquids Terminals, LLC (collectively or individually, “Petitioners”)¹ petition the State Water Resources Control Board (“State Board”) to review the action taken by the California Regional Water Quality Control Board, Los Angeles Region (“Regional Water Board”) in its January 28, 2010 “Amendment to: Revised Cleanup and Abatement Order No. R4-2008-006 (issued April 9, 2008)” (“CAO Amendment”) (Exhibit A). The January 28, 2010 CAO Amendment was issued by the Regional Water Board Executive Officer to Kinder Morgan, Inc., Chevron Corporation, ConocoPhillips, and the Port of Los Angeles. Among other requirements, the CAO Amendment: (a) imposes Cleanup Goals for Soil and Groundwater at the former Los Angeles Marine Terminal, Port of Los Angeles, Berths 171 through 173, Wilmington CA (“LAMT” or the “Site”); and (b) requires the responsible parties to submit a Remedial Action Plan for LAMT by **March 29, 2010** based upon these Cleanup Goals.

¹ Kinder Morgan, Inc., the responsible party named in the Cleanup and Abatement Order Amendment, is an indirect parent of Kinder Morgan Energy Partners, L.P. Kinder Morgan Energy Partners, L.P. is a parent of Kinder Morgan Liquids Terminals, LLC. Kinder Morgan Liquids Terminals, LLC is the successor entity to GATX Terminals Corp., who leased the Site from the Port of Los Angeles between 1983 and 1999.

Concurrent with filing this Petition and pursuant to Section 13320 of the California Water Code and Section 2053 of the CCR, Petitioners further request that a Stay Order be issued by the State Board staying the action of the Regional Water Board's Executive Officer in issuing the requirements contained in the January 28, 2010 CAO Amendment until the State Board reviews the Cleanup Goals and reaches a final resolution regarding those Cleanup Goals.

Finally, Petitioners request that the State Board provide an evidentiary hearing to allow Petitioners to address: (a) the technical, scientific, substantive, and procedural errors associated with the development of the Regional Water Board's new Cleanup Goals and the availability of alternative remedial strategies; and (b) the necessity and urgency of the stay requested herein and supported by the attached Declarations of Lester Feldman, Dawn A. Zemo, P.G., and Andrew D. Cox, P.E. The CAO Amendment requires Petitioners and the other responsible parties to submit a RAP based on the challenged Cleanup Goals by March 29, 2010. Petitioners' request for a stay herein seeks, *inter alia*, to have the State Board vacate this impending deadline for the reasons stated herein.

Petitioners hereby join the following sections of Texaco's concurrently filed Petition: Sections D.2.a, D.2.b, D.2.c, D.2.d, D.2.e, D.3 (paragraphs 1-5 and 7 only), III.A.1, and III.A.2.

I. NAME, ADDRESS, TELEPHONE NUMBER AND EMAIL ADDRESS OF PETITIONERS

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II. THE SPECIFIC ACTION OR INACTION OF THE REGIONAL WATER BOARD THAT THE STATE BOARD IS REQUESTED TO REVIEW.

Petitioners seek review of the Regional Water Board Executive Officer's final action in issuing the January 28, 2010 CAO Amendment that imposes Cleanup Goals for Soil and Groundwater at LAMT. (A copy of the January 28, 2010 CAO Amendment is attached as Exhibit A.)

III. THE DATE ON WHICH THE REGIONAL BOARD ACTED OR FAILED TO ACT

The Regional Water Board's Executive Officer acted on January 28, 2010, as indicated on the CAO Amendment (Exhibit A).

IV. A FULL AND COMPLETE STATEMENT OF THE REASONS THE ACTION OR INACTION WAS INAPPROPRIATE OR IMPROPER

The Cleanup Goals and the technical arguments and conclusions contained in the CAO Amendment are defective, improper, and arbitrary for substantive (*e.g.*, technical and scientific) and procedural reasons. The following addresses the improper actions associated with the CAO Amendment.

A. Substantive Issues

It is axiomatic that cleanup goals for any site must be tailored to meet site conditions. *See* State Water Resources Control Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," as amended on April 24, 1994 and October 3, 1996 ("State Board Resolution No. 92-49" presented as Exhibit B) and Regional Water Quality Control Board, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final dated May 2008 (Exhibit C). With respect to LAMT, the Regional Water Board has required Petitioners and the other responsible parties to undertake numerous environmental investigations and studies at great expense and effort – all for the express purposes of obtaining the scientific data necessary (a) to thoroughly understand Site conditions and (b) to design and undertake any necessary cleanup

based on those Site conditions. However, when it set LAMT Cleanup Goals the Regional Board ignored or refused to incorporate the Site-specific data and information contained in (a) voluminous data from years of costly environmental studies requested by the Regional Water Board and (b) the results of human health and environmental risk assessments required by the Regional Water Board. Instead of considering Site-specific conditions, the Regional Water Board – without any scientific or justifiable basis – defaulted to inapplicable numerical Cleanup Goals for many Site constituents, often based on hypothetical calculations. Thus, the Regional Water Board acted arbitrarily and contrary to regulatory obligations, and the Cleanup Goals in the CAO are scientifically improper and unjustifiably restrictive given the actual conditions at LAMT.²

Cleanup Goals at LAMT must protect the beneficial use of groundwater and surface water and thus be consistent with State Water Board Resolution No. 92-49 (Exhibit B). Implementation of the unsound Cleanup Goals proposed by the Regional Water Board is not necessary to provide that protection, given actual documented Site conditions. Instead, the Site-specific cleanup goals developed using actual Site data and previously proposed by Petitioners to the Regional Water Board in February 2009 are equally protective and scientifically sound, would cost millions of dollars less to implement, and could be implemented in a “green” manner (Exhibit D, Tables 5 and 6; Declaration of Andrew Cox). Because of the Regional Water Board’s failure to follow the standard protocol of using actual site-specific data to develop Cleanup Goals for LAMT, the Regional Water Board’s entire approach to LAMT is suspect and subject to scientific and procedural scrutiny.

Before stating their scientific objections to the Cleanup Goals, Petitioners provide a brief summary of Site background and factual information to place the Site in context.

² As explained herein, based on (a) the voluminous detailed characterization data for soil, gas, sediments, and seawater at LAMT, (b) the nature of the detected chemicals, (c) the results of the human health risk assessment, and (d) the results of the aquatic toxicity assessment, it is clear that the Regional Water Board’s Cleanup Goals are too high by *orders of magnitude* for what is scientifically required to protect the beneficial use of surface water and human health of LAMT.

The former LAMT site (the "Site") is located on Mormon Island, a man-made peninsula constructed in the early 1900s with mostly artificial fill from within the Port of Los Angeles (the "Port") and other fill sources. Mormon Island land use has been exclusively industrial for the past 100-plus years. LAMT (inactive since 1999) is a 17-acre site surrounded by other active petroleum tank farms. Additionally, active and inactive petroleum pipelines are located immediately adjacent to LAMT to the north, west, and south (Figure 1; Exhibit E). The eastern/northeastern boundary of LAMT is the active East Basin Channel, an industrial shipping channel. For approximately 75 years (1924 to 1999), the Site operated as a transshipment and storage terminal for crude oil and petroleum products. After 1969, only crude oil and heavier fuel oils were stored at the Site. All operations at the Site ceased in 1999. Former above- and below-ground equipment and pipelines were removed from the Site in 2003 and 2004. The Site is currently unpaved and unoccupied.

Environmental conditions at LAMT have been thoroughly investigated and documented in dozens of reports over the past 20-plus years, including site investigation, groundwater monitoring, risk assessment, interim remedial action monitoring, forensics, sediment and aquatics testing, and other reports (many of which are provided as exhibits herein). In summary, and as explained in further detail herein, the relevant Site conditions are as follows:

- Residual petroleum is present in soil at the Site. The depth of petroleum-affected soil generally ranges from 1 to 8 feet below ground surface (bgs). The residual petroleum in soil is generally highly weathered. The predominant carbon range of the total petroleum hydrocarbons (TPH) detected is the diesel range. About 100,000 cubic yards of soil are impacted above the Regional Water Board's Cleanup Goal of 180 mg/kg for TPH.

- Lead-impacted soil occurs at the Site, but is limited to the upper 2 feet, with only one exception. Other metals, including thallium, appear to be distributed throughout the Site at various depths.
- Groundwater is present at approximately 2 to 7 feet bgs and is subject to tidal influence such that groundwater flow direction at LAMT reverses between high and low tides. Groundwater has been monitored quarterly for the last four years. As of November 2009, the only dissolved Site-related constituent that exceeds the Regional Water Board's Cleanup Goals is TPH (Exhibit F). Petitioners' testing of the groundwater has shown that the "TPH" reported at the Site is predominantly byproducts of petroleum biodegradation and that the actual concentration of dissolved petroleum is only about 1,000 micrograms/liter $\mu\text{g/l}$ or less (Exhibit G, Table 12). All Site-related discrete constituents (*e.g.*, BTEX) and dissolved metals are either not detected or are below Cleanup Goals. Site groundwater is impacted by oxygenates (MTBE and others) above Cleanup Goals from off-site sources.
- Separate-phase product has historically been present in monitoring wells in the eastern/northeastern portion of LAMT within approximately 100 feet of the East Basin Channel. Product recovery was initiated in 2006. Only sheen was present in any of the on-site wells during the most recent monitoring event in November 2009 (Exhibit F, Table 3).

- A small boomed area of intermittent sheen has been observed on the surface of the channel water adjacent to the northern portion of the Site since 2006. An interim remedial measure consisting of product recovery (skimming) from a series of on-site trenches near and parallel to the rip-rap has been active since 2008. Sheen on the channel water has been observed in only three of the last 12 months, and not in the last four months (Exhibit H, Table 6). This sheen in the channel was composed of highly weathered petroleum in the fuel-oil range (Exhibit I).
- “Seawater” (shipping channel water) and sediments adjacent to the Site were assessed in 2008 (Exhibit J). Seawater and sediment have not been adversely impacted by conditions at LAMT, including in the immediate vicinity of the shipping channel sheen, as discussed in detail in Item IV.A.1 below.
- Petitioners completed a quantitative human health risk assessment in 2008 (Exhibit K), which was subsequently approved by the Office of Environmental Health Hazard Assessment and the Regional Water Board (Exhibit L). The assessment found that current Site conditions do not pose an unacceptable risk to current or future human receptors with the exception of five specific soil locations for the future construction worker and the future outdoor worker, and the potential for vapor intrusion for the future indoor worker. These risks can be addressed most economically by limited, targeted soil excavation and vapor mitigation tailored to future Site development (e.g., if buildings are constructed) (Declaration of Dawn A. Zemo, R.G., ¶ 12).

- Soil and groundwater are significantly impacted off-site and immediately adjacent to LAMT from petroleum releases at tank farms and/or underground pipelines. For example, in November 2009, groundwater conditions beneath the streets adjacent to LAMT ranged from measurable product or sheen (four separate areas) up to about 14,800 µg/l TPH (Exhibit D and Exhibit F, Figure 5 and Tables 1 and 2a).

In summary, the soil at the Site is impacted by weathered diesel-range and heavier petroleum. Site groundwater exhibits a sheen but with few dissolved-phase Site-related constituents except for those identified as “TPH.” The Site poses no risk to aquatic receptors, and the shipping channel water adjacent to the Site is not impacted by dissolved constituents. Mitigation measures at the Site are still addressing the area where sheen was previously seen in the shipping channel. The Site is completely surrounded by (a) active tank farms and industrial operations (where there is floating product in groundwater), (b) active and inactive petroleum pipelines (where there is also floating product in groundwater), and (c) an industrial shipping channel.

1. The Regional Water Board Failed to Incorporate the Data and Conclusions of the Sediment and Seawater Investigation Report (Exhibit J) when Developing LAMT Cleanup Goals.

a. A primary water-quality objective at the Site is protection of beneficial use of surface water. Therefore, the Regional Water Board required a Sediment and Seawater Investigation to assess impacts offshore of LAMT (Exhibit M), the results of which were reported to the Regional Water Board on or about December 15, 2008 (Exhibit J). The Regional Water Board, however, subsequently refused to incorporate these available data in its development of Cleanup Goals.³

³ The Regional Water Board’s failure to use or incorporate this data was not based on any alleged laboratory or quality assurance issues.

Results from the sediment toxicity and seawater chemistry testing demonstrate that:

(a) current and historical Site conditions have not caused sediments adjacent to LAMT to be toxic to aquatic receptors (Exhibit J at 57); and (b) dissolved Site-related constituents are not present in surface water collected adjacent to LAMT (Exhibit J, Tables 21 and 22). With the exception of a small intermittent area of sheen previously observed on the shipping channel water⁴ adjacent to and allegedly associated with LAMT, soil and groundwater conditions at LAMT have *not* adversely impacted beneficial use of surface water (Exhibit J at 57 and Tables 21 and 22) because: (a) Site-related constituents, including TPH, have *not* been detected in surface water; and (b) the sediments are not toxic. Thus, the sediment and seawater data are clear evidence that Site-related constituents in groundwater, including TPH, are naturally attenuating before they can pose a risk to surface water or aquatic receptors. (Declaration of Dawn A. Zemo, R.G., ¶ 10)

b. In an attempt to justify not using results of the Sediment and Seawater Investigation Report, the Regional Water Board stated in the Revised Response that the “sediment and seawater characterization study was not conducted to determine seawater quality” (Revised Response at 10 [Exhibit N]). This is incorrect. Seawater samples were in fact collected from seven locations adjacent to LAMT at high and low tides, including two locations where sheen was present at the time of sampling, for the express objective of evaluating seawater quality (Exhibit J at 57). The results for all 14 samples confirmed that Site-related chemicals, including TPH, are not detected in the seawater.

c. Further, regarding use of the results from the Sediment and Seawater Investigation Report, the Regional Water Board’s attempt to justify the exclusion of TPH data in determining “sediment quality” must also fail. The Regional Water Board argued that TPH “data were not considered in the determination of sediment quality” because “the State’s triad

⁴ Sheen has only been observed in three of the last 12 months, and only when the absorbent boom separating the area of sheen from the shipping channel was broken and thereby allowed water from the shipping channel to enter the boomed area (Exhibit H, Table 6).

approach does not provide guidance for evaluating sediment quality based on TPH; therefore, TPH data were not considered in the determination of the sediment quality.” (Revised Response at 7, 10 [Exhibit N].) However, the risk posed by TPH *can* be assessed even if TPH concentrations are not measured explicitly as part of the triad approach. Although TPH concentrations are not quantitatively evaluated in the chemical-specific portion of the triad approach for *classification* of sediment quality,⁵ the toxicity testing and benthic community assessment at LAMT (Parts 2 and 3 of the triad approach) *inherently account for all chemicals present*, in this case including TPH and biodegradation byproducts. Data from these tests confirm that the sediments are not toxic to aquatic receptors. Thus, the results from the toxicity testing and benthic community assessment can be relied upon to conclude that groundwater contamination at the Site is not posing a risk to aquatic receptors.

d. Considering the results of the Sediment and Seawater Investigation Report with these clarifications and as concluded in that Report, it is correct to conclude that current conditions in soil and groundwater at the vacant and inactive LAMT are *not* posing a risk to aquatic receptors and seawater quality. Indeed, the Regional Water Board itself has already concluded that a Remedial Action Plan for sediment/seawater is not required at LAMT (CAO Amendment at 3 [Exhibit A]) and that “the study [Exhibit J] showed that existing soil and groundwater conditions at LAMT were not adversely impacting sediment conditions” (Revised Response at 10 [Exhibit N]).

e. Therefore, for these reasons alone, the Regional Water Board’s Cleanup Goals – and the significant additional cleanup and expense that would be necessary to meet them – are neither necessary nor justifiable for protection of seawater, sediment, or aquatic receptors, and are therefore improper and overly restrictive. The Regional Water Board’s failure to follow

⁵ State Water Resources Control Board, 2009, Water Quality Control Plan for Enclosed Bays and Estuaries, Part 1. Sediment Quality, Staff Approved, August 25 (Exhibit O).

standard protocol – that is, to use and incorporate Site-specific data when setting the Cleanup Goals – cannot be justified.

2. The Regional Water Board Erred by Using *Drinking Water Standards to Establish Cleanup Goals at LAMT*

a. It is undisputed that groundwater at LAMT is not a source or potential source of drinking water (Revised Response at 2 [Exhibit N]), and yet the Regional Water Board has used drinking water standards, or standards based on the protection of drinking water, to set the Cleanup Goals for groundwater (discussed below) and as the basis to set Cleanup Goals in soil (discussed in Item IV.A.4 of this section) at LAMT.

b. The Regional Water Board's Cleanup Goals for TPH, acetone, 2-butanone, DIPE, MTBE, TBA, and xylenes in groundwater are erroneously based on drinking water taste and odor standards (by relying on the General NPDES Order R4-2007-021, which assumes undiluted recharge to drinking water sources [Exhibit P]). Using this standard, for example, the Cleanup Goal for TPH is set at 100 µg/L based solely on these inapplicable taste and odor standards. Hence, using this standard is completely untenable at LAMT. Moreover, Petitioners have previously provided appropriate Site-specific cleanup goals to the Regional Water Board (Exhibit D, Table 6)⁶ that are equally protective of beneficial uses of surface water and meet the objectives of the California Anti-degradation Policy, as cited by the Regional Water Board. (State Water Resources Control Board Resolution No. 68-16 ("State Water Board Resolution No. 68-16 presented as Exhibit Q)).

c. Under the Anti-degradation Policy (State Board Resolution No. 68-16 [Exhibit Q]), the Regional Water Board may allow concentrations of constituents in groundwater to exist up to concentrations which pose a threat to beneficial uses; *e.g.*, through migration of

⁶ In response to Petitioners' request for a hearing, Petitioners were provided the opportunity to provide a written response in February 2009 (Exhibit R). A hearing was not granted, but Petitioners were allowed to meet with Regional Water Board staff subsequent to the February 2009 submittal. In their written response (Exhibit D), Petitioners proposed Site-specific cleanup goals for LAMT.

groundwater to surface water in concentrations up to the water quality objectives for the surface waters (State Board Resolution No. 68-16 [Exhibit Q]). Petitioners' previously proposed groundwater cleanup goals for these constituents (Exhibit D, Table 5) are sufficiently protective of water quality objectives and the beneficial use of surface water because dissolved constituents in groundwater are *not* adversely impacting surface water. In addition to protection of surface water quality, Petitioners' proposed goals for these constituents in groundwater are protective of human health (including vapor intrusion and all other plausible exposure pathways). Thus, it is simply wrong – and there is no justifiable basis – for the Regional Water Board to have set the Cleanup Goals for these constituents at LAMT based on drinking water criteria and to have rejected Petitioners' scientifically based cleanup goals.

d. Even if drinking water standards were justifiable at LAMT, and they are not, the Regional Water Board failed to recognize that the General NPDES Order R4-2007-021 (Exhibit P) (used as the reference for the Regional Water Board's drinking-water-based Cleanup Goals) allows for use of a dilution factor if site-specific data show that surface water beneficial uses are not impacted. Such data are in fact available for LAMT. As discussed in Item IV.A.1 above, the chemicals for which the Regional Water Board assigned drinking-water-based Cleanup Goals have *not* been detected in the surface water of the shipping channel adjacent to LAMT, and specifically not in the boomed area where sheen was observed on the day of sampling (Exhibit J at 14, Tables 21 and 22). As such, available LAMT data demonstrate that the beneficial uses of surface water have not been impacted by dissolved chemicals, and therefore a dilution factor should be applied to any cleanup goals for chemicals in groundwater at LAMT.

The Regional Water Board failed to apply a dilution factor at LAMT, even though the Regional Water Board recently approved a dilution approach at another similar nearby site adjacent to the harbor.⁷ The Regional Water Board's failure to apply dilution at LAMT, while

⁷ At the former Westway Terminal, concentrations of *site-related* chemicals *in seawater* exceeded screening criteria but were considered "unlikely to represent hazards to marine biota because of conservative and limited toxicity, conservative assumption that marine biota may be exposed to undiluted groundwater, and apparently limited

doing so at a similar site where surface water is actually impacted, is an inconsistent application of regulatory standards and is arbitrary and capricious. *See* State Board Resolution No. 92-49, § II.A (Exhibit B) (providing that a Regional Water Board must “[p]rescribe cleanup levels which are consistent with appropriate levels set by the Regional Water Board for analogous discharges that involve similar wastes, site characteristics and water quality considerations”).

e. For TPH in groundwater, the Regional Water Board erroneously dismissed and failed to apply the cleanup goals previously proposed by Petitioners that were based on cleanup goals set by the Regional Water Quality Control Board, San Francisco Bay for the Presidio of San Francisco for the protection of surface water (marine aquatic receptors) in San Francisco Bay, and that were also applied at Point Molate in the San Francisco Bay Region (Revised Response at 5 [Exhibit N]). The cleanup goals previously proposed by Petitioners were 1,200 µg/L for TPH as gasoline (TPHg), 2,200 µg/L for TPH as diesel (TPHd), and 2,200 µg/L for TPH as motor oil (TPHmo) consistent with levels developed for the Presidio (Exhibit U) and proposed at Point Molate (Exhibit V). As noted in Section IV.2.d immediately above, State Board Resolution No. 92-49 (Exhibit B) requires that there be consistency among Regional Boards in setting cleanup goals for these similar sites in similar settings.

The Regional Water Board was incorrect when it stated that “the Presidio’s site-specific conditions are not appropriate to implement at LAMT because site-specific bioassay data are not available, groundwater beneath LAMT has been impacted, free product still remains at LAMT, and site derived contaminants are being discharged to the ocean.” (Revised Response at 5 [Exhibit N].) The Regional Water Board also erred in its interpretation of the status of the

migration of groundwater constituents to seawater observed to date” (Tetra Tech, Inc., 2008, Final Human Health and Ecological Risk Assessment Report (the Westway risk assessment), Berths 70-71, Signal Street, San Pedro, California, December 31, page 4 [Exhibit S]). In a September 17, 2009 letter approving the Westway risk assessment, the Regional Water Board stated that the “ecological risk assessment concluded that releases from the site that have impacted groundwater or seawater will not be hazardous to marine biota” (Regional Water Board, 2009, Comments on Human Health and Ecological Risk Assessment Report, September 17 [Exhibit T]). In the statements above, Tetra Tech has acknowledged and the Regional Water Board has concurred that it is unreasonable to expect that marine biota are exposed to undiluted groundwater. Therefore, dilution should be considered when evaluating groundwater adjacent to a harbor.

cleanup goals for Point Molate (Revised Response at 6 [Exhibit N]), as explained in Item 5 below. The following points respond to erroneous statements by the Regional Water Board and should be carefully considered with regard to the cleanup goals proposed by Petitioners in Exhibit D and rejected by the Regional Water Board:

1) The marine aquatic organisms evaluated in the sediment toxicity tests at LAMT (Exhibit J at 22) were the same organisms evaluated using bioassays when developing groundwater cleanup goals for the Presidio (Eohaustorius and Mytilus; the Presidio work also evaluated Mysid) (Exhibit V at 23).

2) The Regional Water Board's statement above that impacted groundwater at LAMT differentiates it from the Presidio is not correct because both of these sites, as well as the Point Molate site, have demonstrably impacted groundwater. Further, the TPH in groundwater at the Presidio, Point Molate, and LAMT are from reasonably similar types of sources: primarily weathered fuel products from facilities that had operated for more than 40 years and been closed for almost 20 (Exhibits W at 3 and X at 2 and 3, respectively).

3) Following standard practice, the presence of free product at LAMT will be addressed independently of the dissolved phase constituents.

4) Evidence indicates that Site-derived dissolved-phase chemicals are not "being discharged to the ocean" at LAMT. They have not been detected in seawater and have not had an adverse impact on sediment at LAMT (Exhibit J at 57 and Tables 21 and 22). Indeed, the Regional Water Board has already concluded that a Remedial Action Plan for sediment/seawater is not required at LAMT (CAO Amendment at 3 [Exhibit A]) and that "the study [Exhibit J] showed that existing soil and groundwater conditions at LAMT were not adversely impacting sediment conditions" (Revised Response at 10 [Exhibit N]).

As discussed previously, these “soil and groundwater conditions” include TPH and biodegradation byproducts.

5) The Regional Water Board’s interpretation of Order R2-2008-0095⁸ (Exhibit X) for Point Molate is incorrect. The Regional Water Board erroneously concluded that cleanup goals for groundwater for Point Molate have not been established. As acknowledged in the Order, cleanup goals for groundwater at Point Molate were established in the 2001 Fuel Product Action Level (FPAL) report (Exhibit V), which was approved by the Regional Water Quality Control Board, San Francisco Bay Region (Exhibit Y).

f. In setting groundwater cleanup goals for LAMT in the CAO Amendment, the Regional Water Board used human health-based cleanup goals as groundwater cleanup goals in preference to drinking water criteria when the human health-based goals are based on potential *carcinogenic* effects. In contrast, the Regional Water Board arbitrarily and inappropriately did not use human health-based goals in preference to drinking water criteria when the human health-based goals are based on *noncarcinogenic* effects (Revised Response at 3 [Exhibit N]). This is logically inconsistent and is an unexplained reversal of the position expressed by the Regional Water Board in its August 17, 2009 letter providing proposed cleanup goals for LAMT (Exhibit Z).

3. **The Regional Water Board Erred by Ignoring Site-Specific Conditions and Data and by Using Generic “Background” Concentrations or Hypothetical Leaching Calculations to Set Cleanup Goals for Soil to be Protective of Groundwater for Individual Petroleum Constituents and Metals.**

a. Site groundwater is tidally influenced and shallow (as little as 2 feet below grade in some locations under some tidal conditions). This interaction between soil and groundwater at

⁸ It should be noted that the State Water Board vacated CAO No. R2-2008-0095 on September 15, 2009 for failure to meet California Environmental Quality Act (CEQA) requirements. This did not affect the Fuel Product Action Level Report upon which groundwater cleanup levels for Point Molate are based.

LAMT, coupled with the fact that there have been approximately 75 years of industrial operations at LAMT, has created a Site-specific field-scale demonstration of the potential for chemicals in soil to leach to groundwater. Despite the availability of Site-specific data reflecting the results of this long-term demonstration (Exhibit D, Appendix A), including more than four years of ongoing quarterly groundwater monitoring, the Regional Water Board erroneously used hypothetical leaching calculations or generic background concentrations to set cleanup goals for individual petroleum constituents and metals in soil to protect groundwater (Revised Response, Attachment I, at 8-9 [Exhibit N]). This is incorrect and results in unnecessarily restrictive Cleanup Goals, as demonstrated below.

b. The hypothetical leaching calculations used by the Regional Water Board are proven to be erroneous and not applicable for LAMT when one compares groundwater concentrations to actual soil concentrations at LAMT (Exhibit D, Appendix A). Across most of LAMT, water quality objectives for individual petroleum constituents and metals are not consistently exceeded by dissolved-phase concentrations found in groundwater regardless of soil concentrations (Exhibits D and F).

c. The Regional Water Board's hypothetical leaching calculations are not appropriate and are proven to be erroneous for individual petroleum constituents because the equations do not consider effective solubility, which controls the dissolution of individual constituents from petroleum mixtures (products or crude oil) (Exhibit AA).

d. For lead, both groundwater monitoring data (Exhibit F, Table 2d) and Site-specific leaching tests (Exhibit G at 36 and Table 6) show that dissolved lead has not and will not impact LAMT groundwater above water quality objectives; therefore, the Regional Water Board's default to "background" levels for a soil Cleanup Goal for lead is not supportable and is inconsistent with available Site-specific data.

e. For other metals, including thallium, significant amounts of groundwater monitoring data at LAMT (Exhibit F, Table 2d) confirm that dissolved metals have not impacted

LAMT groundwater consistently above water quality objectives despite the long-term soil/groundwater interaction that has already occurred; therefore, the Regional Water Board's default to "background" levels for a soil cleanup goal is not technically supportable for protection of the beneficial use of surface water or groundwater at LAMT. Under the California Anti-degradation Policy (State Board Resolution No. 68-16 [Exhibit Q]), the Regional Water Board may allow concentrations of metals in soil to exist up to concentrations which pose a threat to beneficial uses, *i.e.*, through leaching of metals in soil to groundwater and subsequent migration of groundwater to surface water in concentrations up to the water quality objectives for the surface waters. Because Site groundwater is not impacted above criteria based on beneficial use protection for surface water, cleanup goals for metals in soil at the Site should be based on protection of human health. Petitioners recommended this in their prior proposed cleanup goals (Exhibit D, Table 6).

f. The background levels used as Cleanup Goals for metals by the Regional Water Board are based on data collected across the State of California. It is unreasonable to use these background levels as cleanup goals for LAMT – a site on a man-made peninsula used solely for heavy industrial uses with peninsula-wide soil and groundwater contamination. While these State-wide concentrations were used by Petitioners in the human health risk assessment to screen out "background" concentrations of metals (Exhibit K), human health-based concentrations were recommended as cleanup goals by Petitioners (Exhibit D, Table 6). The risk-based concentrations proposed by Petitioners are the appropriate bases for setting cleanup goals for metals in soil at LAMT.

g. Many years of monitoring data from LAMT have shown that general conditions in groundwater are stable or improving (Exhibit BB, Appendix C).⁹ This confirms that expected natural attenuation processes are working as expected at LAMT. Because operations at LAMT

⁹ Tetra Tech, Inc., 2008, Quarterly Groundwater Monitoring Report, Fourth Quarter 2007, Former GATX Los Angeles Marine Terminal, Port of Los Angeles, Berths 171 to 173, January 15 (Exhibit BB).

ceased in 1999 and no sources exist on-site that would create potential for new releases, this documented trend is anticipated to continue.¹⁰

h. Finally, the Regional Water Board erred by setting Cleanup Goals for soil that are in direct contact with groundwater based on hypothetical leaching calculations that assume leaching from vadose zone soil to groundwater. Groundwater at LAMT is shallow and tidally influenced so that soil deeper than approximately 2 to 7 feet below ground surface, depending upon the location at LAMT, is in direct contact with groundwater under certain tidal conditions (Exhibit K at 3). Soil deeper than approximately 6 to 8 feet, depending upon the location at LAMT, is always in contact with groundwater regardless of the tide. The equations used by the Regional Water Board assume leaching from vadose zone to groundwater; actual Site-specific data indicate, however, that the equations are not representative of Site conditions and overstate the amount of leaching that is occurring and would be expected to occur. Again, because of the many decades of soil/groundwater interaction that already have occurred at LAMT, actual groundwater conditions are a more reliable measure than hypothetical calculations of the potential for chemicals to leach from soil. Thus, the Cleanup Goals for soil set by the Regional Water Board are inappropriate and unnecessarily restrictive, and the Regional Water Board should have selected the goals proposed by Petitioners in Exhibit D, Table 6, which consider actual LAMT data.

4. **The Regional Water Board's Cleanup Goals for TPH in Soil Are Inappropriate and Technically Indefensible Because They are Based on Environmental Screening Levels Published by the California Regional Water Quality Control Board, San Francisco Bay Region, and Ignore Site-Specific Data.**

a. The Regional Water Board erred by using as Cleanup Goals at LAMT the Environmental Screening Levels (ESLs) for TPH published by the Regional Water Quality

¹⁰ Tetra Tech changed analytical laboratories for the quarterly monitoring program starting in first quarter 2009. This resulted in a significant increase in reported TPHd/mo concentrations in many wells. The increase is related to the change in laboratories and laboratory procedures, and not to an actual change in groundwater conditions. The 2009 concentrations set a new baseline for trend analysis.

Control Board, San Francisco Bay Region, *i.e.*, 180 milligrams per kilogram [mg/kg] for TPHg and TPHd, and 2,500 mg/kg for TPHmo (Exhibit A). The ESLs are conservative screening criteria and, as stated in the introduction to the ESL guidance (Exhibit C), are not intended to be final cleanup goals if site-specific evaluations (such as those that have been conducted at LAMT) show that the ESLs are overly protective.¹¹ The ESL guidance specifically notes that the ESLs for petroleum hydrocarbons are likely too conservative and that long-term groundwater monitoring data should be used to develop site-specific cleanup goals (Exhibit C).

b. The Regional Water Board inaccurately claimed that the ESL it used for TPH in soil was specific to the protection of non-drinking water sources (Revised Response, Attachment II, at 7 [Exhibit N]). In fact, the ESL for TPH was not developed specifically for sites “where groundwater is not a current or potential source of drinking water.” Rather, the “non-drinking water” ESL value for TPH in soil shown on Table B (Shallow Soils Where Groundwater is Not a Current or Potential Source of Drinking Water) is actually based on leaching from soil to groundwater where groundwater is a potential source of drinking water. In the ESL document, the source of the TPH ESL is Table F-1b (Groundwater Screening Levels [groundwater is not a current or potential drinking water resource]), which refers to Table F-4a (Summary of Selected Aquatic Habitat Goals), which for TPH refers to Table F-3 (Summary of Drinking Water Screening Levels). So the ultimate source of the value used to develop a TPH Cleanup Goal in soil is based on ESL Table F-3, which provides risk-based concentrations for groundwater used as a *drinking water* source. Use of this value as a Cleanup Goal for non-drinking water sources is incorrect.

c. Site-specific data show clearly that the Regional Water Board’s Cleanup Goals for TPH in soil (180 mg/kg) are too low by a factor of at least 100 for the purpose of protecting beneficial use of surface water (Exhibits D and G). This is because the petroleum in the Site soil

¹¹ Regional Water Quality Control Board, 2008, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, revised May 2008, page ES-2 (Exhibit C).

is highly weathered, and natural attenuation processes are active. Site-specific data show that, even with high concentrations of weathered TPH in soil (exceeding 20,000 mg/kg), there is very little dissolved petroleum in the groundwater, and that *more than 98%* of the reported TPH in groundwater is the byproduct of petroleum biodegradation (Exhibit G, Table 12). Although concentrations of “TPH” in groundwater are greater than 10,000 µg/L in many locations without using silica gel preparation, groundwater data with silica gel preparation indicate that the dissolved petroleum hydrocarbons component is actually only about 1,000 µg/L or less (Exhibit G, Table 12). Site-specific data show that even with high concentrations of weathered TPH in soil, dissolved “TPH” (without silica gel preparation, which would include the biodegradation byproducts) was not detected in surface water samples (Exhibit J).

5. The Regional Water Board Has Erroneously Set Cleanup Goals for Arsenic, Nickel, Silver, and Organo Lead in Soil When These Chemicals Were Either Detected Below Background Concentrations in Soil or Were Not Detected at LAMT.

a. Petitioners presented LAMT data to the Regional Water Board confirming that concentrations of arsenic, nickel, and silver were considered consistent with background concentrations (Exhibit K at 10). Thus, there is no need to set a cleanup goal for these naturally occurring metals in soil. Similarly, there would be no reason to set a groundwater cleanup goal for these metals. If these cleanup goals set by the Regional Water Board remain operative, indefinite monitoring for these naturally occurring metals during Site remediation activities would be an unreasonable and unnecessary expense for Petitioners.

b. The Cleanup Goal for organo lead in soil is applicable only to tetraethyl and tetramethyl lead. However, these forms of organo lead were not detected in soil samples collected at LAMT (Exhibit K, Table 3-7). Other forms of organo lead, which are less toxic, are already addressed through the Regional Water Board’s Cleanup Goal for total lead. Thus, it is unnecessary to require a cleanup goal for organo lead in soil at LAMT. In Attachment II to the CAO Amendment (Revised Response, Attachment II, at 16 [Exhibit N]), the Regional Water

Board indicated that the Cleanup Goal for organo lead in soil had been removed from Table 3A, but it was not.

6. In Summary and Based on the Previous Discussions (Items 1 through 5): (a) the Cleanup Goals Set by the Regional Water Board Ignore and Are Inappropriate for the Specific Environmental Conditions at LAMT; and (b) the Site-Specific Cleanup Goals Previously Proposed by Petitioners and Described Below Should Instead Apply.

a. Cleanup goals for groundwater should not be based on drinking water criteria, but rather on objectives appropriate to LAMT. These objectives include protection of beneficial use of surface water and protection of human health (Exhibit CC). For the individual organic compounds that do not have concentrations from the California Toxics Rule (CTR), which is the guiding document for protection of beneficial use of surface water, Petitioners' risk-based concentrations (developed from Petitioners' Risk Assessment – a risk assessment required and later approved by the Regional Water Board) are appropriate for LAMT (summarized in Exhibit D, Table 5). This hierarchy and Petitioners' risk-based concentrations are proven to be protective of surface water beneficial use because dissolved-phase constituents have not been detected in seawater adjacent to LAMT (Exhibit J), and concentrations of dissolved-phase constituents in groundwater have generally been declining or stable (Exhibits F, BB). Because LAMT is vacant and there are no current operations on the Site, new releases of chemicals are not possible, and therefore stable or decreasing trends in dissolved-phase constituents are expected to continue, barring any change in Site use. In summary, risk-based concentrations in groundwater to protect human health should be the basis for cleanup goals for individual dissolved phase constituents.

b. TPH is not a chemical listed in the CTR; therefore, Petitioners have proposed cleanup goals for TPH in groundwater that are protective of aquatic receptors and beneficial use of surface water. These aquatic-protection values are not available for other chemicals for which health-based criteria are proposed. For TPH in groundwater, Petitioners have appropriately

proposed the cleanup goals from the Presidio and Point Molate (1,200 micrograms per liter ($\mu\text{g/L}$) for TPHg, 2,200 $\mu\text{g/L}$ for TPHd, and 2,200 $\mu\text{g/L}$ for TPHmo) that were already approved by a Regional Water Quality Control Board to protect the beneficial use of surface water (Exhibits U and V, respectively). These concentrations were developed based on bioassays of marine organisms at the Presidio.¹²

c. Cleanup goals for soil to protect groundwater should not be based on hypothetical leaching calculations used by the Regional Water Board, but rather should be based on the Site-specific relationship between soil concentrations and groundwater monitoring results. Most individual constituents in Site groundwater are below even the Regional Water Board's groundwater Cleanup Goals based on the long-term ongoing, Site-specific field-scale demonstration at LAMT (Exhibit D, Appendix A, and Exhibit F). Therefore, Site soil is not posing a significant source to groundwater for these constituents, and soil Cleanup Goals are unnecessary to protect groundwater. For constituents that are not detected in groundwater or are present below groundwater cleanup goals, soil Cleanup Goals for these constituents, including metals and Site-related individual petroleum constituents, should be the risk-based concentrations developed in Petitioners' prior Risk Assessment because groundwater quality protection has been achieved (Exhibit D, Table 5).

d. Site-specific data show that, even with high concentrations of weathered TPH in soil, there is very little dissolved petroleum in the groundwater and that *more than 98%* of the reported "TPH" in groundwater is comprised of byproducts from petroleum biodegradation (more on this topic later) (Exhibit G, Table 12). Although concentrations of "TPH" in groundwater are high without using silica gel preparation (greater than 10,000 $\mu\text{g/L}$ in many locations), groundwater data with silica gel preparation indicate that the dissolved petroleum hydrocarbons component is actually only about 1,000 $\mu\text{g/L}$ or less. Site-specific data show that

¹² It may be argued that these TPH cleanup goals may not even be necessary at LAMT given that (a) TPH was not detected in any of the 14 surface water samples and (b) the sediments were not toxic.

even with high concentrations of weathered TPH in LAMT soil, dissolved “TPH” (without silica gel preparation, which would have included the biodegradation byproducts if present) was not detected in surface water samples, and the sediments were not toxic. This is clear evidence that the TPH in Site groundwater is naturally attenuating before it can pose a risk to aquatic receptors or surface water. Therefore, TPH in soil is not adversely affecting beneficial use of surface water, and soil cleanup goals for TPH to protect beneficial use of surface water are neither necessary nor justifiable. Thus, human health risk also should be the primary rationale for soil cleanup goals for TPH, as Petitioners have proposed (Exhibit D, Table 6; 7,100 mg/kg for TPHg, 39,000 mg/kg for TPHd, and 350,000 mg/kg for TPHmo).

e. Petitioners’ proposed risk-based concentrations for TPH in soil are justified, and were developed based on the Regional Water Board’s requirements. However, the Regional Water Board in its CAO Amendment has rejected these concentrations as the basis for Cleanup Goals. In lieu of the risk-based concentrations, the Regional Water Board’s “low-risk” guidance for petroleum sites above non-drinking water sources (Exhibits DD and EE) could arguably be applicable to LAMT if the State Board agrees with the Regional Water Board’s rejection of the risk-based TPH concentrations it required Petitioners to prepare. Had Petitioners been given the opportunity to be heard in response to the Regional Water Board’s January 19, 2010 submittal to the Executive Officer concerning the TPH Cleanup Goals therein, Petitioners would have referred to this “low-risk” guidance as a possible alternative to its rejected risk-based TPH soil concentrations. The TPH concentrations in this guidance document (1,000 mg/kg for TPHg; 10,000 mg/kg for TPHd; and 50,000 mg/kg for TPHmo) were in fact previously proposed as soil cleanup goals by Petitioners to the Regional Water Board in a letter dated September 26, 2008 (Exhibit FF). That proposal took place *prior* to publication of the Sediment and Seawater Investigation Report, the results of which bolstered Petitioners’ Site-specific risk-based approach to TPH in soil at LAMT because TPH was not detected in surface water and the sediments were not toxic. Additionally, the concentrations in the Regional Water Board’s guidance are

consistent with levels that would not result in mobile product in soil at LAMT with a large margin of safety (approximately 30,000 mg/kg TPH for fuel oil in a fine to medium sand and 17,000 mg/kg TPH for fuel oil in a medium to coarse sand) (Exhibit GG).

7. **The Regional Water Board Failed to Incorporate the Technical Consequences of Weathering of Petroleum at LAMT when Establishing Cleanup Goals for TPH and Measuring Site Groundwater Relative to Cleanup Goals.**

a. The Cleanup Goal for TPH is based on the taste and odor properties of the dissolved petroleum hydrocarbons associated with fresh (unweathered) diesel fuel. Therefore, to properly compare to the Cleanup Goal, it is critical that the analysis for TPH provide concentrations for the dissolved petroleum hydrocarbons in a sample, and not include other non-hydrocarbon components that could be present in the sample. The petroleum at LAMT is demonstrably highly weathered and biodegraded. As explained below, the biodegradation of petroleum results in the production of non-hydrocarbon byproducts that are measured as “TPH” unless samples are specially prepared (Exhibit HH). The Regional Water Board has improperly failed to allow Petitioners’ proposed use of this preparation method that specifically separates the petroleum hydrocarbons from the biodegradation byproducts (*e.g.*, use of silica gel preparation), which would allow for an appropriate comparison with the Cleanup Goals for TPHd/mo.

b. U.S. EPA Method 8015 for TPH measures organic compounds in a sample, including petroleum hydrocarbons and other non-hydrocarbons that may be present. In the case of samples collected in the vicinity of biodegraded petroleum, the organic compounds present will include the petroleum hydrocarbons and the polar non-hydrocarbons that have resulted from biodegradation of the petroleum (alcohols, organic acids and other compounds). Petitioners’ proposed silica gel preparation step prior to the TPHd/TPHmo analysis would remove or reduce only the polar non-hydrocarbons in the sample; that step would not change the concentrations of the *petroleum* hydrocarbons (Exhibit HH). The Regional Water Board is simply wrong to claim to the contrary. Use of silica gel preparation – particularly at a site with highly weathered

petroleum such as LAMT where biodegradation is clearly active – is necessary to obtain a representative estimate of the petroleum hydrocarbons present in the sample. Petitioners' work at LAMT has shown that the TPH reported in Site groundwater is predominantly the biodegradation byproducts and that the concentration of dissolved petroleum hydrocarbons is about 1 mg/L or less (Exhibit G, Table 12).

c. The Regional Water Board claimed that silica gel cleanup is “not appropriate and necessary for TPH analysis at LAMT because all TPH components including breakdown products...shall be accounted for in measurements of TPH impact at the site” (Revised Response at 7 [Exhibit N]). The Regional Water Board clearly fails to understand that its Cleanup Goals are based on *unweathered* product rather than the combination of the weathered product and the biodegradation products present at LAMT. The Regional Water Board's TPH Cleanup Goals for groundwater are based on the taste and odor properties of dissolved petroleum hydrocarbons associated with *unweathered* diesel, and not on the polar compounds resulting from biodegradation of weathered petroleum. As such, the measurement in environmental media and the basis for the TPH Cleanup Goals are inconsistent, and the Regional Water Board is erroneously requiring the comparison – a comparison that is scientifically unsound. The correct comparison is to compare concentrations from TPH with a silica gel preparation to Cleanup Goals based on dissolved petroleum hydrocarbons associated with unweathered product. The Regional Water Board errs when it misunderstands and then rejects this approach.

d. The State Board, other Regional Water Boards, and the Department of Toxic Substances Control have recognized the technical issue of the inclusion of polar biodegradation byproducts when analyzing samples for TPH, and have issued guidance that specifically recommends the use of silica gel preparation to isolate the petroleum hydrocarbons from the biodegradation byproducts when the objective is to measure the petroleum hydrocarbons.¹³

¹³ State Water Resources Control Board, 2002. AB 2886 Policy Letter Number 12: TPH Analytes, April 26, at 2 (Exhibit II); DTSC, Hazardous Materials Laboratory, 1999. Guidance on Petroleum Hydrocarbon Analysis. October

e. The Regional Water Board erroneously claims that “soil and groundwater beneath the site and the shipping channel water adjacent to the site have been impacted with TPH, TPH related compounds, and degraded TPH compounds” (Revised Response at 7 [Exhibit N]). Although a small area of intermitted sheen was previously observed adjacent to LAMT (where it was separated from the shipping channel by absorbent booms that were occasionally disconnected), sheen has not been observed in nine of the last 12 months, and not in the last several months when the booms were connected (Exhibit H, Table 6). Moreover, dissolved TPH and “degraded TPH compounds” were not detected in surface water in or near the boomed area (Exhibit J). Specifically, TPH was not detected in any of the 14 surface water samples, including four samples from the immediate vicinity of sheen at the time of sampling (Exhibit J). Because these TPH measurements in surface water did *not* include a silica gel preparation step, they would also have picked up any “TPH related compounds” and “degraded TPH compounds.”

The TPH data from the surface water of the shipping channel demonstrate that neither the dissolved petroleum hydrocarbons nor the dissolved biodegradation byproducts are persistent in that surface water, even in the vicinity of the prior sheen.

8. The Regional Water Board CAO Amendment Fails to Incorporate Conditions in the Industrial Area Surrounding LAMT when Setting Cleanup Goals.

LAMT is located on a man-made peninsula that has been used for industrial purposes for approximately 100 years. Chemicals similar – if not identical – to those in soil or groundwater at LAMT are present in soil or groundwater at adjacent properties, and off-site groundwater quality in the immediate Site vicinity ranges from pools of petroleum product to up to about 14,800 µg/L TPHd/mo (without silica gel preparation) (Exhibit F, Figure 5 and Tables 1 and 2a, and Exhibit D). Migration of off-site plumes onto LAMT is evident because, *inter alia*, groundwater at

21, at 3 (Exhibit JJ); Regional Water Quality Control Board, San Francisco Bay, 1999. Memorandum: Use of Silica Gel Cleanup for Extractable TPH Analysis. February 16 (Exhibit KK).

LAMT is impacted by oxygenates, which can only be from off-site sources (Exhibit F).¹⁴ Therefore, to the extent that the Regional Water Board's Cleanup Goals are based in any way on "original background" or drinking water criteria (allegedly to comply with the "Anti-degradation Policy"), such Cleanup Goals are unrealistic and are likely impossible to achieve.

The CAO Amendment fails to consider the demonstrated problem of comingling of plumes and the need to protect any remediation at LAMT from recontamination by off-site sources. LAMT is surrounded by off-site soil and groundwater conditions that exceed the Cleanup Goals (Exhibits K and F). However, the CAO Amendment did not incorporate that fact, and it provides no mechanism for the responsible parties to protect the LAMT cleanup from recontamination. Clearly, in order to avoid recontamination, the owners and operators of contaminated adjacent sites must be required either (a) to implement their cleanups to the same Cleanup Goals at the same time that LAMT was remediated, or (b) to contain their plumes prior to the LAMT cleanup. However, the Regional Water Board has apparently given a pass on timely remedial work to the owners and operators of the active and polluted industrial sites adjacent to LAMT.

For example, as recently as 2004, the Regional Water Board agreed with a present Mormon Island tenant on a contaminated adjacent site that it would be best to coordinate monitoring and remediation activities throughout Mormon Island (rather than to approach Mormon Island cleanup in a piecemeal fashion) (Exhibit LL).¹⁵ Given that (but for the past intermittent sheen) LAMT has not impacted the beneficial use of surface water under current soil and groundwater conditions, the Regional Water Board has acted inconsistently and arbitrarily in setting very low Cleanup Goals for LAMT that are based on "original background" or drinking water criteria.

¹⁴ Gasoline was not stored at LAMT after 1969, and oxygenates were never stored or handled at LAMT; therefore, the oxygenates in Site groundwater must be from off-site sources.

¹⁵ December 10, 2004 Regional Water Board meeting notes for a meeting between Valero representatives (subsequent owners of the adjacent Ultramar property) and the Regional Water Board (Thizar Tintut-Williams and Rebecca Chou present) (Exhibit LL).

9. **Economic and Cost Factors Were Not Balanced by the Regional Water Board Executive Officer in Issuing the CAO Amendments.**

By imposing non-scientific, arbitrary, and inconsistent Cleanup Goals at LAMT, the Regional Water Board has failed to balance the exorbitant cleanup costs – some of which may be unattainable – necessary to meet those Cleanup Goals with alternative means of providing equivalent water quality protection. Thus, the Cleanup Goals imposed by the Regional Water Board are not only technically unsupportable; they are unsupportable from an economic perspective as well. The Regional Water Board's actions are therefore contrary to Resolution 92-49 (Exhibit B, Section III.C), which requires consideration of alternative remedial methods and cost-effective strategies for remediation.

To meet the Regional Water Board's Cleanup Goals for soil, virtually all of LAMT will have to be excavated (more than 100,000 cubic yards), and even then groundwater will not likely achieve the Regional Water Board's very low drinking-water-based Cleanup Goals for decades. The rough estimated costs for complying with these Cleanup Goals is approximately \$30 million, *even though the beneficial use of surface water was sufficiently protected before remediation even started.* Thus, because beneficial use of surface water is not impacted, groundwater and soil Cleanup Goals should be focused on (a) protecting ecological receptors and human health, and (b) mitigating the channel sheen if it were to return. For constituents not detected in LAMT groundwater above Cleanup Goals, soil Cleanup Goals for protection of water quality are unnecessary. Petitioners' previously proposed cleanup goals meet all of these objectives and protect the beneficial use of surface water. Petitioners' proposed cleanup goals could be achieved with approaches ranging from (a) the excavation of a limited soil volume combined with a cap, institutional controls, and the construction of a barrier wall to ensure mitigation of any potential shipping channel sheen to (b) the excavation of up to about 42,000 cubic yards of soil, with no cap, and possibly with no barrier wall. The rough estimated cost for implementing the first approach is approximately \$8 million.

When Petitioners' Site-specific cleanup goals and remedial approaches provide appropriate and sufficient protection of beneficial use of surface water and human health at a far lower cost, it cannot be justifiable for the Regional Water Board to require a cleanup that would cost perhaps \$22 to 32 million more.

10. The Regional Water Board Did Not Incorporate Energy Use and Production of Greenhouse Gases in Setting the Cleanup Goals.

The Regional Water Board has failed to consider the adverse environmental impacts associated with the remediation necessary to meet the Cleanup Goals set forth in the CAO Amendment. One need only look to the prior LAMT RAP (Exhibit CC, Appendix D), which had the same soil TPH Cleanup Goals (180 mg/kg), to confirm the significance of this consideration at LAMT.¹⁶ For example, the calculated greenhouse gas emissions related to a TPH-driven soil excavation showed about 1 metric tonne carbon dioxide (CO₂) per 100 cubic yards of excavated soil. To meet a 180 mg/kg TPH Cleanup Goal for soil (as proposed in remedial alternative No. 1 in the prior and obsolete RAP),¹⁷ about 1,000 metric tonnes of CO₂ would be generated and about 4,000 truck loads of soil would be transported through the Port vicinity. If Petitioners' previously proposed cleanup goals were adopted for a TPH-driven cleanup, equally protective alternative remedial approaches would result in about 160 metric tonnes CO₂ (as proposed in remedial alternative No. 3 of the prior RAP) to 420 metric tonnes CO₂ (if 42,000 cubic yards of soil were excavated). The difference in CO₂ emissions between a remedy based on extensive soil removal and a remedy based on an *in-situ* or less extensive approach is approximately 600 to 800 metric tonnes, equivalent to roughly the emissions from 100 to 150 passenger vehicles for one year. Thus, it was error for the Regional Water Board to

¹⁶ The prior RAP was based on the Regional Water Board's former LAMT Cleanup Goals, many of which were significantly revised and lowered in the CAO Amendment. Those former Cleanup Goals were never incorporated into a final order, notwithstanding the Regional Water Board's 2008 demand for the submittal of a RAP based on those goals (Exhibit CC).

¹⁷ The cleanup goal for TPH in soil at that time was the same as the recommended value in January 2010 (180 mg/kg).

have ignored these considerations, especially given that the 4,000 truckloads of soil will travel significant distances through and near residential neighborhoods.

B. Procedural Issues

1. Petitioners Have Not Been Provided With a Mechanism for Addressing or Responding to the Regional Water Board Staff's January 19, 2010 Revised Response (Exhibit N) Incorporated into the CAO Amendment.

On August 17, 2009, the Regional Water Board staff issued Final Staff Recommendations for Site Specific Soil and Groundwater Cleanup Goals to the Executive Officer (Exhibit Z). On September 11, 2009, AMEC Geomatrix on behalf of Petitioners filed a timely response directed to the Executive Officer (Exhibit MM) concerning the August 17, 2009 Final Staff Recommendations, which response contained Petitioners' concerns and objections to those Final Staff Recommendations. On September 15, 2009, the Executive Officer directed Regional Water Board staff to further justify their responses to the stakeholder comments concerning the August 17, 2009 Cleanup Goals, and to make any changes to those Cleanup Goals as staff saw fit.

Four months later, on January 19, 2010, Regional Water Board staff issued their Revised Response to Stakeholder Comments (the "Revised Response") (Exhibit N). Staff's Revised Response proposed new and lowered Cleanup Goals, and included new technical theories and conclusions in support of those new Cleanup Goals. Staff's Revised Response did not address the procedure or timing for Petitioners or other stakeholders to submit comments, but Petitioners immediately commenced preparation of a written response to the Revised Response.

However, on January 28, 2010, only seven working days after the Revised Responses were issued, the Executive Officer issued the CAO Amendment incorporating the Regional Water Board staff's January 19, 2010 revised proposed Cleanup Goals (Exhibits A and N). Thus, the Regional Water Board adopted the new technical theories and conclusions upon which

those goals were allegedly based *without* providing Petitioners any reasonable opportunity for comment or clarification or to be heard.

By failing to provide Petitioners, or anyone else, with the opportunity to respond to these new technical theories and conclusions and to the new and more restrictive Cleanup Goals contained in the CAO Amendment, the Regional Water Board acted inappropriately and in contradiction to important policy considerations of allowing active participation and input in a matter such as this. The Regional Water Board's failure to provide any vehicle for communication, clarification, or objection has forced Petitioners to bring this Petition without the benefit of a complete record of what would have been Petitioners' arguments to the Regional Water Board concerning the new January 19, 2010 Cleanup Goals and technical theories and conclusions.

2. **The Executive Officer Has Improperly Demanded That Any Submittals by the Responsible Parties at LAMT Concerning Cleanup Goals, Remediation Proposals, and the RAP Must Be Agreed To and Signed By All of Those Parties,**

Paragraph No. 1 of Revised Order No. R4-2008-0006 (Exhibit M) directs all parties to work together with the Port of Los Angeles to coordinate submittals to the Regional Water Board. While "coordination" may be a reasonable request, the Regional Water Board's Executive Officer subsequently demanded in writing that all substantive submittals be jointly submitted, agreed to, and signed by all the responsible parties. Exhibits NN and OO hereto (Regional Water Board Letters dated August 26, 2008 and September 3, 2008) document this demand for joint agreement and signatures.

The Regional Water Board has enforced this unreasonable demand. For example, when the Executive Officer required that the responsible parties' proposed preliminary cleanup goals be submitted by September 26, 2008, she indicated that this and *all subsequent submittals* had to be signed by and agreed to by all four parties. The Executive Officer advised the responsible

parties that, without joint signatures and agreement, their submittals *would not be considered* by the Regional Water Board (Exhibit OO).

To date, the Executive Officer has not amended her directive or given any indication that she would review a substantive document from, say, three responsible parties if one responsible party was unwilling to cooperate. This allows one unreasonable responsible party to thwart the submittal of significant work from another responsible party or parties.¹⁸

This is not just a hypothetical argument. The Regional Water Board issued a Notice of Violation¹⁹ to the responsible parties because a signature page signed by all the parties was not submitted with the Site Characterization and Human Health Risk Assessment Report, even though the cover letter to that Report explained the reason why all four parties had not signed the document (Exhibit K), and even though the Report was submitted by three of the four parties to meet the stated deadline for the document. The NOV was rescinded only when a single signature page was submitted to the Regional Water Board by all four responsible parties (with caveats).²⁰

Petitioners raise this issue because submittal of the new *RAP* by the **March 29, 2010 deadline** pursuant to the CAO Amendment will require Petitioners to agree to joint submittal

¹⁸ Additionally, Petitioners understand that, contrary to the Regional Water Board's direction that it will consider only submittals that are agreed upon and signed by all parties, the Regional Water Board has been meeting and corresponding separately with representatives of the Port – one of the responsible parties – to discuss issues related to all four parties. For example, a review of Regional Water Board files confirmed that the Regional Water Board met privately with representatives of the Port on at least three occasions to discuss technical issues, without advising Petitioner of those meetings and without providing Petitioner an opportunity to participate in those meetings. (See Meeting Attendance Sheets dated June 5, 2006, April 4, 2007, and July 10, 2007; [Exhibit PP].) Moreover, the file review also disclosed that the Regional Water Board was privately corresponding with representatives of the Port on important technical issues, again without Petitioners' knowledge, and again without Petitioners having the opportunity to participate (e.g., an email from Geraldine Knatz, Director of the Port, to Tracy Egoscue of the Regional Water Board dated August 1, 2008, and emails among Thizar Tintut Williams of the Regional Water Board and Kay Johnson and David Liu of Tetra Tech (the Port's consultants) on August 14, 2008 [Exhibit QQ]). If the Regional Water Board can negotiate freely and privately with one party, Petitioners believe that, similarly, a plan submitted by one of the parties or by the parties separately should be sufficient for Regional Water Board review, if it has a reasonable likelihood of success in providing beneficial use protection.

¹⁹ Regional Water Board, 2008, Notice of Violation and Response to the October 31, 2008 Site Characterization and Risk Assessment Report to Cleanup and Abatement Order No. R4-2008-006 (Exhibit RR).

²⁰ Regional Water Board, 2008, Follow Up to Your Response to the November 25, 2008 Notice of Violation to Cleanup and Abatement Order No. R4-2008-006 – Former GATX Los Angeles Marine Terminal, Port of Los Angeles, Berths 171 through 173, San Pedro, California, December 19, 2008 (Exhibit SS).

language that may be inappropriate, inaccurate, and/or biased. In addition, there is little doubt that the responsible parties will continue to disagree, *inter alia*, about remedial alternatives in the new RAP and the implementation of questionable and challenged Cleanup Goals. This unsupportable “joint agreement” requirement will also force Petitioners to incur extra and unnecessary expense with respect to the submittal of a RAP that must be signed by and agreed to by four responsible parties with different and potentially competing interests concerning LAMT.

V. THE MANNER IN WHICH PETITIONERS ARE AGGRIEVED

The Cleanup Goals and technical conclusions and theories relied upon in the CAO Amendment: (a) are unreasonable and technically unsound; (b) are not scientifically necessary or justifiable for the protection of the beneficial uses of surface water and protection of human health at LAMT; (c) are contrary to legal and regulatory requirements; (d) are not supported by evidence in the administrative record; (e) ignore the voluminous Site-specific data and the incorporation thereof into Petitioners’ scientific analyses; and (f) fail to balance or incorporate any cost/benefit analysis, public opinion, or negative environmental and human health effects of implementing the new Cleanup Goals. (Declarations of Lester Feldman, Dawn A. Zemo, P.G., and Andrew Cox, P.E.) Furthermore, the requirements imposed under the CAO Amendment could ultimately impose considerable costs on Petitioners (a) for potential penalties for the inability to comply with the unworkable time schedule and the challenged technical requirements,²¹ and (b) for preparation of a new RAP and the implementation of excessive soil remediation and groundwater treatment measures without an adequate demonstration that meeting such requirements would, for example, materially improve water quality. (Declarations of Lester Feldman, Dawn A. Zemo, P.G., and Andrew Cox, P.E.) In fact, such expenditures could have a negative impact on water quality by diverting funds away from other more appropriate remediation that might have a higher potential for achieving improvements in water

²¹ The Revised Cleanup and Abatement Order (CAO No. R4-2008-006) states that failure to comply with the CAO (and amendments) may result in imposition of civil liabilities (Exhibit M)..

quality. The expensive and wasteful steps necessary to meet the Cleanup Goals in the CAO Amendment will also result in the consumption of excessive energy and in the creation of significant “greenhouse gases” during the soil and groundwater remediation processes – all of which will negatively impact the environment and residents near LAMT without improving beneficial use of the surface water. (Declaration of Andrew Cox, attached hereto.)

VI. THE SPECIFIC ACTION BY THE STATE BOARD OR THE REGIONAL WATER BOARD THAT PETITIONERS REQUEST

Petitioners request that the State Board: (1) rescind the Cleanup Goals for soil and groundwater contained in the Amendment to Revised Cleanup and Abatement Order dated January 28, 2010; and (2) adopt (a) the Site-specific cleanup goals proposed by Petitioners in their February 2009 submittal to the Regional Water Board (Exhibit D, Tables 5 and 6), and (b) Petitioners’ proposed use of silica gel preparation to appropriately measure TPH at LAMT.

To the extent that the Regional Water Board’s position on setting soil TPH goals in the CAO Amendment remains intractable (rejecting the risk-based goals it required Petitioners to prepare) and is supported by the State Board, Petitioners request in the alternative that the State Board reject the arbitrary TPH concentrations presented in the CAO Amendment and adopt the Regional Water Boards’ general “low-risk” TPH guidelines for soil above non-drinking water sources (Exhibits DD and EE), setting TPH concentrations as follows: 1,000 mg/kg for TPHg, 10,000 mg/kg for TPHd, and 50,000 mg/kg for TPHmo.

Petitioners also request a stay of (a) the CAO Amendment’s requirement for submittal of a RAP based on the challenged Cleanup Goals and challenged technical conclusions and theories *by March 29, 2010*, and (b) the subsequent implementation of a cleanup based upon the Cleanup Goals and the other challenged technical theories and conclusions contained in that CAO Amendment. Until such time as the Cleanup Goals are finalized through the petition process, it will be a great waste of money, time, and energy to prepare and implement the RAP required under the CAO Amendment – a RAP whose very foundations are subject to significant

challenges by this Petition and by the separate Petition being filed concurrently herewith by Texaco, another responsible party, and whose implementation could result in the unnecessary expenditure of many millions of dollars.

Petitioners' request for Site-specific cleanup goals is supported by the Declarations of Lester Feldman and Dawn A. Zemo, P.G., and their request for a stay is supported by the Declarations of Lester Feldman, Dawn A. Zemo, P.G., and Andrew Cox, P.E.

VII. A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL ISSUES RAISED IN THE PETITION

Petitioners' preliminary statement of points and authorities is set forth in Section IV above. Petitioners reserve the right to supplement this statement upon receipt and review of the full administrative record.

Further, the actions required by the Cleanup Goals for soil and groundwater contained in the CAO Amendment are inappropriate and improper because the Regional Water Board's actions are contrary to the facts and law as set forth in provisions of Division 7 of the California Water Code and the policies, standards and regulations adopted in compliance with said Water Code provisions. Petitioners request leave to amend this petition to file additional Points and Authorities at a future date.

VIII. STATEMENT THAT THE PETITION HAS BEEN SENT TO THE REGIONAL WATER BOARD AND TO THE DISCHARGER, IF NOT PETITIONER

A copy of this Petition has been sent to the Regional Water Board and to the other dischargers named in the CAO Amendment.

IX. STATEMENT THAT THE SUBSTANTIVE ISSUES OR OBJECTIONS RAISED IN THE PETITION WERE RAISED BEFORE THE REGIONAL WATER BOARD, OR AN EXPLANATION OF WHY PETITIONERS WERE NOT REQUIRED OR UNABLE TO RAISE THESE ISSUES

Nearly all of the issues and objections raised in this Petition were raised previously in written comments to, or in meetings, email correspondence, or discussions with the Regional Water Board staff as described in Section IV above and submitted in support of this Petition.

Any other issues not previously raised are based on and relate to new requirements and conclusions contained in the January 28, 2010 CAO Amendment. As explained herein, neither Petitioners nor anyone else was afforded any opportunity to present substantive issues and objections to the Regional Water Board relating to the CAO Amendment's new requirements, given the Executive Officer's quick and unexpected adoption on January 28, 2010 of staff's new January 19, 2010 proposed Cleanup Goals. This grievance is aggravated by the short time schedule (60 days) for submittal of the RAP under the CAO Amendment.

In addition, the Regional Water Board members did not consider at any public hearing the LAMT Cleanup Goals or the technical theories and conclusions on which those Goals were based. Given the remedial work necessary to meet the Cleanup Goals and its negative effects on human health and the environment (*see* Declaration of Andrew Cox, attached hereto), and given the Regional Water Board's failure to take these effects into account in any sort of cost/benefit analysis, the Regional Water Board's failure to allow public input is suspect and subject to scrutiny.

X. REQUEST FOR HEARING BEFORE THE STATE BOARD

Petitioners request that a hearing be held before the State Board for two basic reasons. First, Petitioners seek to present oral argument and testimony with regard to the issues described in the Statement of Reasons in Section IV above. Petitioners were deprived of the opportunity to present comment and testimony to the Regional Water Board in response to staff's January 19, 2010 Revised Response because the Executive Officer of the Regional Water Board signed and issued the CAO Amendment incorporating the staff's Revised Response only seven working days after the Revised Response was issued. Had Petitioners had that opportunity, they would have presented evidence and testimony relevant to the Regional Board staff's Revised Responses, and they should have that opportunity now to present such evidence and testimony to the State Board at a hearing.

Second, Petitioners seek a hearing on their stay request. Petitioners need the opportunity to further explain the urgency and waste associated with the preparation of a RAP within the next 30 days – *by March 29, 2010* – and the subsequent implementation of that RAP based on suspect Cleanup Goals subject to the appellate process and subject to change.

XI. REQUEST FOR STAY ORDER

Petitioners request a stay of the submittal and implementation of a RAP incorporating the Cleanup Goals set forth in the CAO Amendment pending resolution by the State Board of the issues raised in this Petition. This is especially critical as the CAO Amendment requires that a RAP be submitted to the Regional Water Board *by March 29, 2010*. This stay request is based on the attached declarations under penalty of perjury by persons having knowledge of the facts alleged (*see* attached Declarations of Lester Feldman, Dawn A. Zemo, P.G., and Andrew Cox, P.E.) that demonstrate: (a) substantial harm to Petitioners or the public interest if a stay is not granted; (b) a lack of substantial harm to other interested persons and to the public interest if a stay is granted; and (c) substantial questions of fact or law regarding the disputed action.

Preparation of a RAP based on unsound Cleanup Goals that are presently subject to the petition process is an unreasonable demand that will cause Petitioners to incur great expense without any assurance that such a RAP will ever be used or be appropriate. Thus, to require the submission of that RAP by *March 29, 2010* would cause substantial harm to Petitioners if the stay is not promptly granted. Moreover, it is simply not possible to prepare the RAP necessary to address the new Cleanup Goals – and then to meet the unreasonable requirement of having to “agree” to the remedial alternatives prepared by other responsible parties – by March 29, 2010.

As confirmed by the attached declarations of distinguished scientists, LAMT has been vacant for more than a decade, and it is not presently posing any environmental threat to other

interested parties or the public interest. Finally, Petitioners have presented many substantial questions of fact and law in this Petition that require time and scientific expertise to resolve.

Date: March 1, 2010

Respectfully Submitted:

A handwritten signature in black ink, appearing to read "Nancy E. Van Burgel", written over a horizontal line.

Nancy E. Van Burgel
Kinder Morgan, Inc.
Kinder Morgan Energy Partners, L.P.
Kinder Morgan Liquids Terminals, LLC

VERIFICATION

I, Nancy E. Van Burgel, declare as follows:

I am Assistant General Counsel for petitioners Kinder Morgan, Inc., Kinder Morgan Energy Partners, L.P., and Kinder Morgan Liquid Terminals, LLC. I have read the foregoing Petition for Review and Request for Stay. I am informed and believe that the facts alleged in the Petition are true to the best of my knowledge.

I declare under penalty of perjury under the law of the State of California that the foregoing is true and correct and that this verification is executed on March 1, 2009, at Denver, Colorado.



Nancy E. Van Burgel

ATTACHMENTS

Declaration of Lester Feldman

Declaration of Andrew Cox

Declaration of Dawn A. Zemo

EXHIBITS

- Exhibit A Amendment dated January 28, 2010 to Revised Cleanup and Abatement Order No. R4-2008-006 issued April 9, 2008 (Regional Water Board)
- Exhibit B California State Water Resources Control Board Resolution No. 92-49
- Exhibit C Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (San Francisco Bay Regional Water Quality Control Board, May 2008).
- Exhibit D Response to Request for Additional Information Related to Cleanup Goals and Proposal for Alternative Cleanup Goals Related to Remedial Approach (AMEC Geomatrix, February 2009)
- Exhibit E Figure 1: Site Plan, Groundwater Monitoring Wells, and Historical Site Features
- Exhibit F Fourth Quarter 2009 Groundwater Monitoring Report (Tetra Tech, January 15, 2010)
- Exhibit G Additional Sampling and Human Health Risk Assessment (Geomatrix, Inc., February 6, 2007)
- Exhibit H December 2009 Free Product Removal Report, Former Los Angeles Marine Terminal, Port of Los Angeles Berths 171-173 (Tetra Tech, January 15, 2010)
- Exhibit I Letter Describing Forensic Analysis of Sheen (Luce Forward Hamilton & Scripps, LLP, October 4, 2006)
- Exhibit J Technical Report, Sediment and Seawater Investigation, Former GATX Los Angeles Marine Terminal, Berths 171 to 173 (AMEC Earth & Environmental, Inc., December 15, 2008)
- Exhibit K Site Characterization and Risk Assessment Report (AMEC Geomatrix, Inc., October 31, 2008)
- Exhibit L Comments on Site Characterization and Risk Assessment Report – Former GATX Los Angeles Marine Terminal (Regional Water Board, March 17, 2009)
- Exhibit M Revised Cleanup and Abatement Order No. R4-2008-006 issued April 9, 2008 (Regional Water Board)
- Exhibit N January 19, 2010 Regional Water Board Memorandum regarding Revised Responses to Stakeholder's Comments, from Samuel Unger, Assistant Executive Officer, to Tracy Egoscue, Executive Officer
- Exhibit O Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (State Water Board, August 25, 2009)
- Exhibit P Regional Water Board Order No. R4-2007-021, Waste Discharge Requirements for Treated Groundwater and Other Wastewaters from Investigation and/or Cleanup of Petroleum Fuel-Contaminated Sites to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties
- Exhibit Q California State Water Resources Control Board Resolution No. 68-16

- Exhibit R December 15, 2008 Request for Hearing Regarding Our November 14, 2008
 “Clean Up Goals for Soil and Groundwater” Letter – Former GATX Los Angeles
 Marine Terminal (Regional Water Board, January 30, 2009)
- Exhibit S Final Human Health and Ecological Risk Assessment Report, Berths 70-71 Signal
 Street, San Pedro, California (Tetra Tech, Inc., December 30, 2008)
- Exhibit T Comments on Human Health and Ecological Risk Assessment – Port of Los
 Angeles at Berths 70-71, (Regional Water Board, September 17, 2009)
- Exhibit U Development of Presidio-Wide Cleanup Levels for Soil, Sediment, Groundwater,
 and Surface Water, Presidio of San Francisco, California (Erler & Kalinowski,
 Inc., October 30, 2002)
- Exhibit V Final Fuel Product Action Level Development Report, Naval Fuel Depot Point
 Molate, Richmond, California (Tetra Tech EM Inc., for Southwest Division,
 Naval Facilities Engineering, August 31, 2001)
- Exhibit W Regional Water Board Order No. 91-082 for Presidio of San Francisco
- Exhibit X Regional Water Board Order No. R2-2008-0095, Site Cleanup Requirements and
 Recision of Order Nos. 95-235, 97-124 and 97-125
- Exhibit Y Approval of Final Fuel Product Action Level Development Report, Naval Fuel
 Depot Point Molate, Richmond, California (Regional Water Board, November 26,
 2001)
- Exhibit Z Final Staff Recommendation for Site-Specific Soil and Groundwater Cleanup
 Goals for Former GATX Los Angeles Marine Terminal (Regional Water Board,
 August 17, 2009)
- Exhibit AA Predicting the Effect of Hydrocarbon and Hydrocarbon-Impacted Soil on
 Groundwater (O’Reilly, K.T., Magaw, R. I., Rixey, W.G., American Petroleum
 Institute Soil & Groundwater Research Bulletin No. 14, September 2001)
- Exhibit BB Fourth Quarter 2007 Groundwater Monitoring Report (Tetra Tech, January 15,
 2008)
- Exhibit CC Remedial Action Plan, Former GATX Los Angeles Marine Terminal, Port of Los
 Angeles Berths 171 to 173, Wilmington, California (Tetra Tech, Inc., January 14,
 2009)
- Exhibit DD Interim Site Assessment & Cleanup Guidebook (Regional Water Board, May
 1996)
- Exhibit EE UST Closure Criteria (Draft) (Regional Water Board, April 2004, rev. Sept. 2006)
- Exhibit FF Revised Preliminary Cleanup Goals (AMEC Geomatrix, September 26, 2008)
- Exhibit GG Non-Aqueous Phase Liquid (NAPL) Mobility Limits in Soil, (Brost, Edward J.,
 DeVauil, G. E., 2000, American Petroleum Institute, Soil & Groundwater
 Research Bulletin (No. 9), June).
- Exhibit HH The Technical Case for Eliminating the Use of the TPH Analysis in Assessing
 and Regulating Dissolved Petroleum Hydrocarbons in Ground Water (Zemo, D.A.
 and Foote, G.R., Ground Water Monitoring & Remediation 23 No. 3, Summer
 2003, pp 95-104)
- Exhibit II State Water Resources Control Board (SWRCB) Letter No. 12, Total Petroleum
 Hydrocarbon (TPH) Analytes, AB2886 Policy (State Water Board, April 26,
 2002)

- Exhibit JJ California Guidance on TPH Methods (Department of Toxic Substances, Hazardous Materials Laboratory, October 21, 1999)
- Exhibit KK Use of Silica Gel Cleanup for Extractable TPH Analysis (California Regional Water Quality Control Board, San Francisco Bay Region, February 16, 1999)
- Exhibit LL Record of Communication, Ultramar Facility, (Regional Water Board, December 10, 2004)
- Exhibit MM Response to Proposed Cleanup Goals dated August 17, 2009 (AMEC Geomatrix, September 11, 2009)
- Exhibit NN Correction to the Comments on Preliminary Cleanup Goals, Extension for Technical Reports Submittal Due Dates, and Additional Comments (Regional Water Board, August 26, 2008)
- Exhibit OO Revision to Correction to the Comments on Preliminary Cleanup Goals, Extension for Technical Reports Submittal Due Dates, and Additional Comments (Regional Water Board, September 3, 2008)
- Exhibit PP Regional Water Board Meeting Attendance Sheets dated June 5, 2006, April 4, 2007, and July 10, 2007
- Exhibit QQ Email from Geraldine Knatz, Director of the Port, to Tracy Egoscue of the Regional Water Board dated August 1, 2008, and emails among Thizar Tintut Williams of the Regional Water Board and Kay Johnson and David Liu of Tetra Tech (the Port's consultants) on August 14, 2008
- Exhibit RR Notice of Violation and Response to the October 31, 2008 Site Characterization and Risk Assessment Report to Cleanup and Abatement Order No. R4-2008-0006 (Regional Water Board, November 25, 2009)
- Exhibit SS Notice of Violation and Response to the October 31, 2008 Site Characterization and Risk Assessment Report to Cleanup and Abatement Order No. R4-2008-006 (Regional Water Board, November 25, 2008)

BEFORE THE STATE WATER RESOURCES CONTROL BOARD

In the Matter of the California Regional Water)	
Quality Control Board – Los Angeles Region.)	DECLARATION OF
Amendment to Revised Cleanup and Abatement)	LESTER FELDMAN
Order to Impose Cleanup Goals for Soil and)	IN SUPPORT OF
Groundwater – Former GATX Los Angeles)	PETITION FOR REVIEW
Marine Terminal, Port of Los Angeles, Berths)	AND REQUEST FOR
171 through 173, Wilmington, CA)	STAY

I, Lester Feldman, hereby declare and state as follows based on my own personal knowledge and experience. If called upon to do so, I could and would competently testify.

1. I am a Principal Scientist with AMEC Geomatrix, Inc. ("AMEC") with extensive experience in toxic and hazardous material control and regulatory requirements related to such materials.
2. I hold a B.S. Degree in Meteorology and Oceanography Engineering and a M.S. Degree in Civil Engineering from the University of Michigan. I have over 35 years of employment experience in development, implementation and consultation related to toxic and hazardous material site investigations, assessment and remedial strategies in California.
3. I have been a Principal Scientist with AMEC, formerly Geomatrix Consultants, Inc., from 1994 to the present.
4. Prior to my employment with AMEC, I was employed for approximately 20 years at the California Regional Water Quality Control Board, San Francisco Bay Region ("San Francisco Bay Regional Water Board"), which is part of the California Environmental Protection Agency. At the San Francisco Bay Regional Water Board, I became an Environmental Specialist IV (ES IV Supervisor) in the Toxics Cleanup Division. My responsibilities included supervision and case management of more than 2,000 toxics and hazardous material release sites where soil, groundwater, and surface water were impacted and/or threatened within the nine San Francisco Bay Area counties.
5. For those sites, I made numerous recommendations to the San Francisco Bay Regional Water Board at numerous public hearings and to its Executive Officers in cases where no hearing occurred under the Cleanup and Abatement Order administrative process (Section 13304 of the California Water Code). These recommendations included the appropriateness of alternative cleanup levels as well as the appropriateness of various alternative remedial approaches.
6. As a senior staff member of the San Francisco Bay Regional Water Board, I participated in numerous program meetings and policy discussions with staff of the State Water Resources Control Board ("State Board"). These meetings and discussions included the consideration of alternative remedial strategies and

alternative cleanup goals for toxics and hazardous materials sites. The use of alternative remedial strategies and alternative cleanup goals are included in State Board policy, including Resolution No. 92-49.

7. I have been qualified to testify as an expert in toxic and hazardous materials, water quality and water quality related regulatory matters in both federal and state courts. I have also testified on water quality related matters representing the San Francisco Bay Regional Water Board.
8. A true and correct copy of my resume setting forth my credentials in greater detail is attached hereto as Exhibit A.
9. AMEC is currently providing consulting services to Kinder Morgan related to the site investigation and remediation project at the Former Los Angeles Marine Terminal at the Port of Los Angeles, Berths 171 to 173 in Wilmington, California (the "Site").
10. As part of my consulting services for the Site, I have reviewed the "Amendment to: Revised Cleanup & Abatement Order No. R4-2008-0006 (Issued April 9, 2008) Requiring Kinder Morgan, Inc., Chevron Corporation, ConocoPhillips, and the City of Los Angeles, Harbor Department (a.k.a. Port of Los Angeles) to Assess, Cleanup and Abate the Effects of Contaminants Discharged to Soil, Groundwater, and Seawater (File No. 90-006)" (the "CAO Amendment"). This CAO Amendment was dated January 28, 2010 and was administratively issued by the Executive Officer of the Los Angeles Regional Water Quality Control Board ("Regional Water Board") without a hearing before the Regional Water Board members. The CAO Amendment contains amended Cleanup Goals for the Site. Cleanup Goals for groundwater and soil are set forth in Exhibit A, Attachment I, Table 2A and in Exhibit A, Attachment I, Table 3A, respectively.
11. The CAO Amendment directs Kinder Morgan, Inc., Chevron Corporation, ConocoPhillips and the Port of Los Angeles ("the Responsible Parties") to remediate the site under the following specified method: "The Responsible Parties shall employ the Cleanup Goals set forth in Exhibit A, Attachment I, Table 2A for groundwater, and Exhibit A, Attachment I, Table 2B for soil,¹ which are hereby established for the remediation that is required by the Order."
12. The numerical Cleanup Goals for total petroleum hydrocarbons (TPH) in groundwater contained in Table 2A of the CAO Amendment are inappropriate and unreasonable, as they are not based on beneficial uses of groundwater and surface water at the site. The Cleanup Goals for total petroleum in groundwater are derived from taste and odor threshold criteria usually applied to drinking water. According to a January 19, 2010 Memorandum from Regional Water Board staff entitled "Revised Responses to Stakeholder's Comments" (the "January 19, 2010 Memorandum"), the Site is "no longer designated for municipal beneficial use" (*i.e.*, drinking water). The Regional Water Board staff has repeatedly stated that the groundwater underlying the Site need not be considered to have beneficial use as drinking water. Thus, application of taste and odor thresholds for drinking water would not be appropriate for the Site. Cleanup Goals set for the purpose of addressing potential exposure to vapors

¹ The CAO Amendment contains a typographical error: the Cleanup Goals for soil are set forth in Table 3A, not Table 2B as stated in the CAO Amendment.

should only be based on the actual exposure scenarios related to future development and beneficial use of surface water at the Site: construction workers and swimmers in the harbor. Additionally, there are mitigation methods that could be used to address vapor issues, which are applied as a matter of practice at numerous sites, and are not dependent on concentrations in groundwater. The Cleanup Goals for TPH contained in Table 2A of the CAO Amendment are not consistent with these specific threats to beneficial uses of ocean water and to the potential human health protection. Specific risk-based Cleanup Goals are appropriate.

13. The numerical Cleanup Goals for TPH in soil specified in Table 3A of the CAO Amendment are inappropriate and unreasonable, are not based on Site specific facts, and go far beyond the need for protection of the specified beneficial uses of groundwater, protection from migration of impacted groundwater to ocean waters, and risk-based human health protection. The Cleanup Goals contained in the CAO Amendment for soil impacted by TPH are based on the San Francisco Bay Regional Water Board published guidelines known as Environmental Screening Levels ("ESLs"), which expressly specify that these levels are not cleanup levels. For soil in contact with groundwater, the actual concentration of the TPH in groundwater provides a factual basis for determining the amount of TPH acceptable to remain in soil, not screening level ESLs as prescribed by the CAO Amendment.
14. The numerical Cleanup Goals for metals in soil specified in the CAO Amendment are inappropriate and unreasonable, and are not based on Site specific facts. The Cleanup Goals for metals in soil contained in Table 3A of the CAO Amendment are based on the regional background soil concentrations in California. The numerical Cleanup Goals for metals in soil should be based on protection of human health and the prevention of the migration of metals in groundwater to surface water in concentrations above the California Toxics Rule ("the CTR"), which contains water quality objectives for surface waters and not groundwater and forms the basis for the Cleanup Goals for metals contained in Table 2A of the CAO Amendment. Actual validated site-specific concentrations of metals in groundwater at the Site do not exceed the CTRs on a consistent basis, if at all. Therefore, actual concentrations of metals in soil at this time do not cause metals in groundwater to exceed specified Cleanup Goals for groundwater, nor threaten to cause concentrations in groundwater that could migrate to surface waters, even without dilution, above the CTRs. Thus, the Cleanup Goals for metals in soil contained in the CAO Amendment are theoretical and are not based on Site-specific facts. These cleanup goals for soil should be based on the potential for leaching of the metals from soil to groundwater and migration of groundwater to surface water in concentrations above the CTR, based on actual data, in order to protect the beneficial uses of adjacent surface waters. More specifically, groundwater concentrations from the Site indicate that lead and other metals (with few exceptions) are not detected in actual groundwater, in direct contrast to the theoretical approach taken by the CAO Amendment.

15. The numerical Cleanup Goals for metals in soil are not consistent with State Water Resources Control Board policies. The January 19, 2010 Memorandum from the Regional Water Board staff refers to the California Anti-degradation Policy (Resolution No. 68-16). Under this Policy, the Regional Water Board may allow concentrations of metals in soil to exist up to concentrations which pose a threat to beneficial uses; *i.e.*, through leaching of metals in soil to groundwater and subsequent migration of groundwater to surface water in concentrations up to the water quality objectives for the surface waters. For this Site the CTR concentrations are the appropriate water quality objectives for surface waters. The Cleanup Goals for metals in soil contained in the CAO Amendment do not appropriately consider Resolution 68-16. Cleanup Goals for metals in soil at this Site should be based on human health-based risk analysis considering the absence of potential impacts to groundwater above criteria based on beneficial use protection.
16. The specified requirement to "...employ the Cleanup Goals set forth..." does not allow for any alternative remedial strategies to be applied to the Site. This is inconsistent with Sections III.C and E of State Board Policy 92-49. This Policy states as follows:
 - "The Regional Water Board shall implement the following procedures to ensure that dischargers shall have the opportunity to select cost-effective methods for detecting discharges or threatened discharges and methods for cleaning up or abating the effects thereof. The Regional Water Board shall:"...
 - "...C. Require the discharger to consider the effectiveness, feasibility, and relative costs of applicable alternative methods for investigation, and cleanup and abatement."; and
 - "...E. Ensure that the discharger is aware of and considers the following cleanup and abatement methods or combinations thereof, to the extent that they may be applicable to the discharge or threat thereof."
17. Since the Regional Water Board staff has previously indicated that the groundwater need not be considered to have beneficial use as a drinking water source, the water quality protection should be directed primarily to ocean surface water beneficial uses. There are numerous remedial approaches, based on existing soil and groundwater data that would protect these ocean surface water beneficial uses without meeting the specified Cleanup Goals listed in Table 2A and Table 3A of the CAO Amendment.

Based on the above information, it is my conclusion that substantial questions of fact exist with regard to the Cleanup Goals contained in the Regional Water Board Executive Officer's CAO Amendment.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Date: February 17, 2010

Lester Feldman

(type or print name)



(signature of declarant)



LESTER FELDMAN

Regulatory Specialist
Litigation Support / Expert Witness
Hazardous Material Control
Water Quality

EDUCATION

M.S., Civil Engineering, University of Michigan, Ann Arbor, MI, 1972

B.S., Engineering—Meteorology and Oceanography, University of Michigan, Ann Arbor, MI, 1970

PROFESSIONAL HISTORY

AMEC Geomatrix, Inc., Vice President and Principal Scientist, 2008 to date

Geomatrix Consultants, Inc., Vice President and Principal Scientist, 1994 – 2008

California Regional Water Quality Control Board, Supervisor, Toxics Cleanup Section, 1975 – 1994

Bechtel, Incorporated, San Francisco, Process Engineer, 1973 – 1974

SKILLS AND EXPERIENCE

Mr. Feldman has 35 years of experience in the development and implementation of site cleanup programs, and in consulting on water resources and toxic and hazardous materials control programs.

He has managed remedial investigation and cleanup programs at industrial sites; provided assistance with both regional as well as site specific proposed Brownfields redevelopment projects; advised and/or provided expert opinions and testimony and private enforcement assistance in areas including site investigation and remediation (risk management) strategies, regulatory matters, urban redevelopment projects (Brownfields), storm water management, and site closures. Mr. Feldman also has experience in environmental forensics and in reviewing and interpreting the ultimate allocation or responsibility for soil and groundwater affected by chemicals.

Through his experience as Senior Environmental Specialist at the California Regional Water Quality Control Board (RWQCB), Mr. Feldman brings strong working relationships and an in depth knowledge of developing and implementing toxic materials and water quality control programs to facilitate site closure. Programs included permitting and regulation of municipal, agricultural, and commercial waste treatment facilities; storm water runoff; water reuse and reclamation; erosion control; timber harvest regulation; and small community wastewater program assistance. Mr. Feldman also served as an original member of the California State Water Resources Control Board's Task Force on Underground Storage Tanks.

Mr. Feldman provides clients with guidance and interpretation on existing and planned agency permit and enforcement actions, both formal and informal. These activities primarily relate to regulation of releases of hazardous substances to the environment and the interpretation of agency policies, staff guidelines, and practices. In addition, Mr. Feldman provides regulatory and technical advice on compliance with the Clean Water Act, including the development or the review of storm water pollution prevention plans (SWPPPs) and erosion control plans, performing site inspections and obtaining compliance letters from the regulatory agencies.

In addition, he has provided opinions on the level of threat or impact to surface and groundwater. He has provided expert testimony on fingerprint analyses for metal waste, storm water regulations, soil and waste sampling procedures, and the requirements for investigation and cleanup of the

RWQCB, Alameda County Health, and the California Department of Toxic Substances Control. In addition, he has opined and testified on the source of lead, petroleum products, and chlorinated solvents in soil and groundwater at several sites, and on alleged vapor intrusion from soil and groundwater into a home. He has also provided expert opinions and testimony for the U.S. Department of Justice on the release of fuel to the soil and groundwater at a currently used drinking water source.

Mr. Feldman has managed the implementation of numerous Brownfields cleanup and redevelopment projects. He was the Principal Consultant for the very successful City of Emeryville, California Brownfields Cleanup Program grant implementation.

He has also participated in the negotiation of several federal and state Superfund Consent Orders involving multiple responsible parties at complex sites, including those involving trichloroethylene and other industrial solvents in soil and groundwater; and lead, arsenic, and other metals in soil, wetlands, and aquatic organisms. He coordinated numerous enforcement actions with the State Attorney General's Office, the Federal Justice Department, and local District Attorneys' offices, including toxic chemical cases with the Alameda County District Attorney's office, and coordinated numerous multi-agency projects involving approvals of remedial plans for National Contingency Plan and other toxic sites. Mr. Feldman was also responsible for the development and presentation of numerous enforcement orders for reconsideration by the RWQCB at public hearings, and coordinated many State Superfund remediation projects with the California Department of Toxic Substances Control and local agencies.

REPRESENTATIVE PROJECTS

REGULATORY COMPLIANCE

Underground Storage Tank Program. (Prior to GMX) Managed the San Francisco Bay RWQCB's leaking underground storage tank (UST) program from 1981 – 1994. He assisted U.S. EPA staff in Washington, D.C., in developing and implementing the federal program and participated in EPA State Program Coordination Conferences. Mr. Feldman served as an original member of the California State Water Resources Control Board's Task Force on Underground Storage Tanks. He participated in the development and implementation of the Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites. Mr. Feldman coordinated the leaking UST program for numerous local agencies in the San Francisco Bay Region, including local implementing agencies (LIAs) and the state and federally funded local oversight programs (LOPs).

Regulatory Compliance Strategy. (Various Projects) Provides clients with guidance and interpretation related to existing and planned agency permit and enforcement actions, both formal and informal. These activities primarily relate to regulation of releases of hazardous substances to the environment and the interpretation of agency policies, staff personalities, and agency staff and board practices. Developed successful roadmaps for numerous development projects in San Francisco and Oakland, including the S.F. Giants baseball stadium.

Toxic Site Cleanup Program Manager, San Francisco Bay RWQCB Section Chief, California. (Prior to GMX) Participated in the resolution of impacted soil and groundwater sites in the San Francisco Bay and other areas of California. Coordinated remedial investigations and recommended approval of remedial plans for numerous toxic sites with impacted soil and

groundwater. Also responsible for development and presentation of numerous enforcement orders for consideration by the RWQCB at public hearings and coordinated inter-agency efforts.

Superfund Consent Orders. (Prior to GMX) Participated in the negotiation of several federal and state Consent Orders involving multiple responsible parties at complex sites, including those involving trichloroethene and other industrial solvents in soil and groundwater; and lead, arsenic, and other metals in soil, wetlands, and bay shellfish. He coordinated numerous enforcement actions with the State Attorney General's Office, the Federal Justice Department, and local District Attorneys' offices, including numerous matters with the Alameda County District Attorney's office. He coordinated numerous multi-agency projects involving approvals of remedial plans for Superfund and other toxic sites. Also responsible for the development and presentation of numerous enforcement orders for consideration by the RWQCB at public hearings, and coordinated many State Superfund remediation projects with the California Department of Toxic Substances Control (DTSC) and local agencies.

Toxic Site Cleanup Programs. Mr. Feldman coordinated numerous federal facility toxic site cleanup programs, including Hunters Point Naval Shipyard, Concord Naval Weapons Station; and Moffett Field; he provided regulatory guidance for remedial investigations at Lawrence Livermore National Laboratory (volatile organics in the drinking water) and Sandia National Laboratories (petroleum hydrocarbons in vadose zone).

Brownfields Redevelopment, Various Locations, California. (GMX # 3705) Project manager. At the RWQCB in the early 1980s, provided a leadership role in the development and use of risk-based corrective actions for sites affected by metals, fuel releases, chlorinated volatile organic chemicals, and semi-volatile organic chemicals, thereby promoting cost-effective, "smart" redevelopment projects. He was a key developer of the Risk Management Plan concept while at the Water Board and also assisted with the development of streamlined environmental actions with the City of Oakland, Water Board, DTSC, and U.S. EPA. At AMEC Geomatrix, Mr. Feldman has managed the implementation of numerous site-specific brownfields cleanup and redevelopment projects and has presented papers and held workshops at U.S. EPA Brownfield conferences. He was principal-in-charge of the very successful Emeryville Brownfields Program, one of the first U.S. EPA Brownfield grant projects.

Baseball Stadium (AT&T Park), San Francisco Giants, San Francisco, CA. (GMX # 3608) Directed the investigation and cleanup of soil contaminated primarily with lead and petroleum hydrocarbons. Coordinated the formation of inter-agency site committee that resulted in a streamlined decision-making and communication body on issues implemented by AMEC Geomatrix, including site investigation requirements, agency documentation requirements, risk-based corrective action implementation and approval, and risk communication to local agencies and citizen groups.

Casey Avenue Remediation/Monitoring Project, Applera Corporation, Mountain View, CA. (GMX # 6352) Principal-in-charge. Negotiated, designed, and completed soil excavation and related building shoring program for chlorinated solvents, providing contract services for soil disposal (approximately \$1.0 million). AMEC Geomatrix is active in ongoing groundwater monitoring and reporting, soil gas investigations, and review of new and adjacent site investigations.

Catellus - Mission Bay Project, City and County of San Francisco Department of Public Works, San Francisco, CA. (GMX # 3000) Principal-in-charge of development of investigation and remediation criteria for the 400-acre site's redevelopment activities. Developed and received multi-