

LICENSE AGREEMENT

THIS LICENSE AGREEMENT (“Agreement”) is made this ____ day of _____, 2020, (the “Effective Date”) by and between, on the one hand, Colony Park Town House Association (“Licensor”) and, on the other hand, Union Pacific Railroad Company, Daniel C. Helix (on behalf of himself and Mary Lou Helix, Elizabeth Young, John V. Hook, Steven Pucell, and Nancy Ellicock), and Contra Costa County (collectively, “Licensee”).

RECITALS

- A. Licensor owns certain real property (assessor parcel number 148-340-039-4) located at the southeastern corner of the intersection of Hookston and Bancroft Roads in Concord, California (the “Property”).
- B. Pursuant to the *Requirement for a Soil Vapor and Indoor Air Sampling Workplan, Hookston Station, 228 Hookston Road, Pleasant Hill, Contra Costa County*, dated 6 October 2017 (the “Directive”), and *Conditional Approval of Vapor Intrusion Investigation Workplan, Hookston Station, 228 Hookston Road, Pleasant Hill, Contra Costa County* dated 10 March 2017 (the “Conditional Workplan Approval”), the California Regional Water Quality Control Board for the San Francisco Bay Region (“RWQCB”) has ordered the implementation of a vapor intrusion investigation in and around the Property in connection with monitoring and remediation activities (the “VI Investigation”) being undertaken on or about the Hookston Station site located at 228 Hookston Road in Pleasant Hill, California, which is located immediately west of the Property.
- C. The VI Investigation includes the installation and sampling of four soil vapor probes. The approximate location of the soil vapor probes is shown on Figure 1 of the *Vapor Intrusion Investigation Workplan, 228 Hookston Road, Pleasant Hill, Contra Costa County*, dated 16 December 2016 (the “Workplan”), which was approved by the RWQCB on 10 March 2017, and is attached to this Agreement as Exhibit A.
- D. The parties desire to enter into this Agreement in order for Licensee Parties (as defined below) to enter the Property for the purpose of performing VI Investigation activities in accordance with the Workplan.

The parties, therefore, agree as follows:

AGREEMENT

1. GRANT OF LICENSE

Licensor hereby grants a nonexclusive, irrevocable license, as of the Effective Date, to Licensee and its authorized agents, employees, contractors, consultants, including ERM-West, Inc. and its contractors, and any governmental agency (collectively, "Licensee Parties") to enter the Property solely to perform the VI Investigation activities associated with the Workplan, Directive, and/or Conditional Workplan Approval (collectively, "Licensee Parties' Activities").

2. TERM OF USE

A. COMMENCEMENT

As of the Effective Date, Licensee Parties shall have the right to immediately access the Property to perform Licensee Parties' Activities subject to the terms of this Agreement.

B. NOTIFICATION

Licensee Parties shall notify Licensor at least twenty-four (24) hours prior to entering the Property to allow Licensor's representatives to be present to observe Licensee Parties' Activities, and to ensure the safety of the Property and Licensee's compliance with the terms and conditions of this Agreement. Where Licensee Parties' Activities will continue over a period of several days, Licensee Parties shall provide Licensor with a schedule of activities for such period and no further notice concerning those activities shall be required.

C. PERIOD OF USE

Once installed, the soil vapor monitoring probes shall remain on the Property for a period of two (2) years, or until the RWQCB approves the cessation of sampling and the removal of the probes, whichever is later (the "Period of Use"). The Period of Use includes the period of time during which the Licensee is ordered by the RWQCB to perform Licensee Parties' Activities on the Property, including, but not limited to, soil vapor monitoring at the soil vapor probes on a semiannual basis.

This License Agreement shall terminate and have no further force and effect upon the conclusion of the Period of Use

3. COMPLETION OF LICENSEE PARTIES' ACTIVITIES

A. RESTORATION OF PROPERTY

Upon completion of the Licensee Parties' Activities, Licensee Parties shall, at their sole cost and expense, remove all of Licensee Parties' personal property and restore the surface of the Property, as nearly as possible, to the condition that existed prior to Licensee Parties' entry

hereunder. In the event Licensee Parties fail to remove Licensee Parties' personal property or restore the surface of the Property, Licensor may elect, after first providing written notice to Licensee Parties of such election and providing Licensee Parties with a reasonably practicable time to cure such non-performance, to remove Licensee Parties' personal property, restore the surface of the Property, and seek to recover the costs and expenses therefor from Licensee Parties.

B. PREPARATION OF AS-BUILT DOCUMENTATION

When the installation of the soil vapor monitoring probes on the Property is complete, Licensee Parties shall, at their sole cost and expense, prepare and submit to Licensor as-built drawings depicting the location and construction details of the soil vapor probes installed on the Property.

4. LICENSEE PARTIES' CONDUCT ON THE PROPERTY

A. RISK OF USE

Licensee Parties shall use the Property at their sole risk.

B. COMPLIANCE WITH LAWS

Licensee Parties shall comply with all local, state, and federal laws, regulations, rules, and orders that pertain or are applicable to Licensee Parties' Activities, including but not limited to those laws, whether existing as of the Effective Date or enacted thereafter, that relate to the use, storage, handling, treatment, or disposal of hazardous substances, materials or wastes, and those that relate to health, safety, noise, environmental protection, air quality, or water quality.

5. OTHER REQUIREMENTS

A. SUBMISSION OF REPORTS

Licensee Parties shall provide Licensor with copies of the results of analytical tests, photographs, geological logs, and reports (electronic or similar) submitted to governmental agencies relating to Licensee Parties' Activities on the Property.

B. LICENSOR'S ACCESS

Licensor and its members and other occupants of the Property shall, at all times, have access to the Property and to the specific locations on which Licensee Parties' Activities are conducted. Licensor shall not interfere and shall cause its members and other occupants of the Property to not interfere with any of Licensee Parties' Activities on the Property. Licensor may take split samples of any air, soil, or groundwater at its sole discretion and expense, in the event Licensee Parties' Activities include the collection of such samples. Following completion of the installation of the soil vapor probes on the Property, Licensor shall not conduct and shall cause its members and other occupants of the Property to not conduct any activities on the Property that may interfere with, disturb, damage, destroy, or remove any portion of the soil vapor probes

installed on the Property without the express written consent of Licensee and the RWQCB and/or other governmental agency exercising jurisdiction over the soil vapor probes on the Property.

6. INSURANCE

Licensee Parties' consultants and contractors shall obtain and maintain, or cause to be obtained and maintained, at its sole cost and expense during the periods in which Licensee Parties are conducting Licensee Parties' Activities on the Property: (a) Commercial General Liability insurance, providing bodily injury and property damage coverage, with a combined single limit of not less than \$1,000,000 per occurrence and not less than \$1,000,000 in the aggregate; (b) Auto Liability insurance covering owned, non-owned, and hired vehicles, providing bodily injury and property damage coverage, with a combined single limit of not less than \$1,000,000 per occurrence; and (c) Worker's Compensation insurance with limits as required by statute. All of the aforesaid policies shall name the Licensor as a named additional insured and provide that said insurance shall not be cancelled unless thirty (30) days' prior written notice (ten [10] days for non-payment of premium) shall have been given to Licensor. Licensee shall provide Licensor with proof of said additional insured endorsement upon request.

7. LIENS

Licensee shall keep the Property, and any part thereof, free and clear of all mechanics', materialmens', contractors', or subcontractors' liens arising from, or any claim for damage arising out of, Licensee Parties' Activities.

8. NOTICES

All notices required herein may be given or sent by telephone call, voicemail message, facsimile transmission, United States mail, nationally recognized overnight courier service, or such other method as the parties may agree upon (except that any notice required to be in writing must be in writing), and shall be directed as follows:

To Licensor: Colony Park Town House Association
P.O. Box 2384
Pleasant Hill, CA 94523

With a copy to:

Homeowners Management Company, LLC
2151 Salvio Street, Suite 250
Concord, CA 94520

To Licensee Parties: Lauren Mancuso
Manager Environmental Site Remediation
Union Pacific Railroad Company
1408 Middle Harbor Road, Oakland, CA 94607
(916) 217-5086

Robert C. Bylsma, Esq.
Law Department
Union Pacific Railroad Company
9451 Atkinson Street
Roseville, CA 95747
(916) 789-6229

Daniel C. Helix
1102 Northridge Court
Concord, CA 94518

Mr. J. Garrett Deal
Miles Westbrook @Deal LLP
3390 Mount Diablo Boulevard, Suite 200
Lafayette, CA 94549
(925) 938-4500 ext. 4

Contra Costa County
Department of Conservation and Development
Attn: Maureen Toms
30 Muir Road
Martinez, CA 94553

Any party may change its designated address by providing written notice thereof to each of the other parties to this Agreement.

9. ASSIGNMENT, SUCCESSORS, AND ASSIGNS

This Agreement is binding upon all successors and assigns of the parties.

10. NO ADMISSION

Nothing contained in this Agreement shall be construed as an admission of any fact or liability of any party to this Agreement.

11. AUTHORITY TO ENTER INTO AGREEMENT

Each party represents to the other that it has the authority to enter into this Agreement.

12. COUNTERPARTS AND FACSIMILE SIGNATURES

This Agreement may be executed in counterparts and when so executed shall constitute one agreement that shall be binding upon all parties hereto, notwithstanding that the signatures of all parties' designated representatives do not appear on the same page. A facsimile or electronic

copy of a signature page shall bind the executing party and represent that the original signed document is in that party's possession or control. The parties shall exchange original signed signature pages upon reasonable demand.

13. INDEMNIFICATION

To the maximum extent permitted by law, Licensee shall indemnify, defend and hold harmless the Licensor, its officers, directors, managers, and employees from and against all liabilities, damages, and costs (including reasonable attorneys' fees) arising from or related to any and all claims for any property damage, personal injury or death to the extent caused by Licensee, its contractors, subcontractors arising from or related to the Licensee Parties' Activities.

14. ATTORNEY'S FEES

If either party becomes involved in litigation or arbitration arising out of this License Agreement or the performance thereof, the prevailing party in such proceeding shall be awarded its reasonable costs and expenses, including attorneys' and experts' fees. In awarding attorneys' fees, the court or arbitrator shall not be bound by any court fee schedule, but shall, if it is in the interest of justice, award the full amount of costs, expenses, and attorneys' fees paid or incurred in good faith

THIS AGREEMENT is executed by the parties hereto as of the day and year first set forth above.

Licensor:

COLONY PARK TOWN HOUSE ASSOCIATION

By: _____

Name:

Title:

Licensee:

UNION PACIFIC RAILROAD COMPANY

By: _____

Name:

Title

DANIEL C. HELIX (on behalf of himself and Mary Lou Helix, Elizabeth Young, John V. Hook, Steven Pucell, and Nancy Ellicock)

By: _____

Daniel C. Helix

CONTRA COSTA COUNTY

By: _____

John Kopchik

Director, Department of Conservation and Development

Exhibit A



16 December 2016

Mr. Ralph Lambert
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Colony Park Town Houses Vapor Intrusion Investigation
Workplan, 228 Hookston Road, Pleasant Hill, Contra Costa
County

Dear Mr. Lambert:

ERM-West, Inc. (ERM) has prepared this *Colony Park Town Houses Vapor Intrusion Investigation Workplan* in response to the *Requirement for a Soil Vapor and Indoor Air Sampling Work Plan* provided on 6 October 2016 by the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), on behalf of the parties named in paragraph 3 of the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board) Order No. R2-2007-0009, *Adoption of Final Site Cleanup Requirements and Rescission of Order Nos. R2-2003-0035 and R2-2004-0081* (30 January 2007, the "Order"). The Hookston Station Parties (Hookston Parties) include Union Pacific Railroad Company (UPRR), Daniel C. and Mary Lou Helix, Elizabeth Young, John V. Hook, Steven Pucell, Nancy Ellicock, and the Contra Costa Redevelopment Agency (now referred to as "Department of Conservation and Development").

This workplan presents the following:

- Background;
- Objectives;
- Proposed Activities; and
- Project Schedule and Reporting.

BACKGROUND

To date, the Hookston Parties have completed extensive site characterization, monitoring and remediation of Site-related VOCs including trichloroethene (TCE) and its breakdown products. The current Water Board-approved self-monitoring program consists of semiannual soil vapor monitoring of 19 soil vapor probes, and semiannual, annual, and/or biennial groundwater monitoring of 74 monitoring wells. Indoor air samples are collected annually within up to 38 homes within the Colony Park neighborhood, pending homeowner access. The most recent monitoring results are documented in the *Third Quarter 2016 Monitoring Report*, dated 31 October 2016.

This workplan was prepared to comply with the San Francisco Regional Water Quality Control Board (Water Board) directive letter *Requirement for a Soil Vapor and Air Sampling Work Plan, Hookston Station, 228 Hookston Road, Pleasant Hill, Contra Costa County*, (Directive) dated 6 October 2016. The Directive required preparation of a workplan to collect indoor air samples inside, and soil vapor samples immediately adjacent to, the residential structures at the southeast corner of Bancroft Road and Hookston Road. Based on preliminary information, it is ERM's understanding that the residential complex identified in the Directive is called the Colony Park Town Houses and consist of 2-story structures, composed of attached, townhomes/apartments. The Colony Park Town Houses complex is located cross gradient to the Hookston Station plume, on the south side of Bancroft Road from the Hookston Site. The directive letter stated a requirement to conduct additional indoor air sampling inside the residences along Bancroft Road and soil vapor sampling immediately adjacent to the structures, in light of new trichloroethene (TCE) toxicity criteria issued by the United States Environmental Protection Agency (USEPA) in 2011. The Directive noted that the Water Board established short-term trigger levels for TCE in soil vapor and groundwater: "*concentrations that suggest a threat of exceeding indoor air action levels and a need for indoor air sampling*". These values are established in the draft *Interim Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region* (Interim TCE Framework), prepared by the Water Board and dated 16 October 2014.

On behalf of the Hookston Parties, ERM submitted a response letter dated 7 November 2016 to the Water Board. In the letter, ERM agreed

with the requirement to install soil vapor probes and collect soil vapor samples. ERM also clarified information presented in the Directive and stated that it is premature to require collection of indoor air inside the townhomes/apartments until soil vapor immediately adjacent to the townhomes/apartments is characterized. ERM noted that the “step-wise” approach documented in 2011 California Environmental Protection Agency Department of Toxic Substances Control (Cal EPA/DTSC) guidance (*Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air [Vapor Intrusion Guidance]*) specified collecting proximal soil vapor data and reviewing results prior to collection of indoor air samples.

As noted in ERM’s response letter, indoor air samples were collected from five of the townhome/apartment units in 2004 and 2005. TCE was detected at a very low concentration of 0.19 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in one housing unit (1204 Hookston Road) and was not detected (<0.16 to <0.20 $\mu\text{g}/\text{m}^3$) in the other sampled housing units. These concentrations are well below the current residential indoor air ESL of 0.48 $\mu\text{g}/\text{m}^3$.

On 8 November 2016, the Water Board responded to ERM’s initial response letter affirming the need to collect indoor air, but allowing collection of indoor air samples as a contingency to be implemented “if concentrations of concern are found in the soil vapor samples”. The Water Board also specified that indoor air samples would only need to be collected within the three western townhome/apartment units in the complex, should the indoor air sampling contingency be activated. The Water Board specified that access agreements would need to be obtained before soil vapor sampling to expedite the indoor air sampling process. The Water Board provided draft guidance for the implementation of vapor intrusion investigations, and indicated that such a document is currently being drafted but is not yet final or approved. As currently drafted, the guidance would require collection of indoor air samples following the collection and evaluation of soil vapor data. In its response letter, the Water Board provided health risk criteria to guide response actions to soil vapor concentrations, as follows:

Response Action:

No Further Action:

- Soil Gas (SG) contamination poses risk $<1 \times 10^{-7}$ and Hazard Index (HI) <0.1 .

Further Evaluation of Soil Gas and Preferential Vapor Intrusion (VI) Pathways Needed:

- SG contamination poses risk of 1×10^{-7} to 1×10^{-6} or HI is 0.1 to 1.0 as shown by two sampling rounds; additional samples along suspected preferential pathways needed.

Indoor Air Sampling Needed:

- SG contamination poses risk $>1 \times 10^{-6}$ or HI >1 .

Until soil vapor data can be collected and appropriately evaluated, the Hookston Parties believe it is inappropriate and premature to present access requests to the residents for indoor air sampling. Accordingly, the workplan presented herein was prepared in accordance with the step-wise approach recommended by DTSC's Vapor Intrusion Guidance and is consistent with the approach in the Water Board's Interim TCE Framework. Soil vapor immediately adjacent to the townhomes/apartments will be characterized first, to determine whether sampling of more direct media (subslab vapor and indoor air) are deemed necessary. If concentrations of concern are detected in the new soil vapor probes, a contingency plan will be immediately activated to proceed with indoor air sampling access requests and sampling.

OBJECTIVES

In its Directive, the Water Board states that "there is a potential for vapor intrusion to selected residential units at the Colony Park townhomes/apartments located on the southeast corner of Bancroft and Hookston Roads, specifically those along Bancroft Road." Accordingly, ERM has prepared this workplan to characterize soil vapor immediately adjacent to the northwest portion of the townhome/apartment complex, along Bancroft Road. If TCE is detected in the new soil vapor probes above the applicable health risk criteria noted in the Water Board's 8 November 2016 response letter (risk $<1 \times 10^{-6}$ and HI <1.0), indoor air and

subslab vapor will be characterized within the western townhome units to evaluate potential vapor intrusion.

PROPOSED ACTIVITIES

To meet the objectives stated above, ERM proposes to install and sample two nested, permanent soil vapor probes on the northwest side of the townhomes/apartments complex. Proposed nested soil vapor probe locations are presented on Figure 1. Soil vapor results will be reviewed and compared against a health risk-based trigger level for TCE derived using site-specific criteria including soil type and geophysical parameters. If soil vapor concentrations in any of the shallow probes exceed this value, subslab vapor probes will be installed and sampled, and indoor air samples will be collected within the three westernmost townhome residential units to characterize potential vapor intrusion to indoor air. The site-specific human health TCE trigger value will be derived immediately following the soil vapor probe installation, based upon soil logging observations and results of soil geophysical samples collected while drilling the soil vapor probes, in conjunction with extensive site condition information previously collected. The TCE trigger value will be derived in accordance with the DTSC 2015 Vapor Intrusion Guidance and Water Board 2014 Interim TCE Framework documents.

Following field activities, ERM will prepare a Vapor Intrusion Investigation summary report for submittal to the Water Board.

All workplan components will be completed in accordance with current vapor intrusion regulatory guidance, including the July 2015 *Advisory – Active Soil Gas Investigations* (Soil Vapor Guidance) and the 2011 Vapor Intrusion Guidance documents developed by the Cal EPA/DTSC. The Soil Vapor Guidance provides operational guidance specifically related to soil vapor probe installation, sampling and analysis. By contrast, the Vapor Intrusion Guidance provides direction more broadly related to overall completion of vapor intrusion investigations.

Access Agreement(s) for Soil Vapor Probe Installation and Sampling

In order to characterize soil vapor in close proximity to the townhomes, one or more access agreements will be prepared and a request for access will be sought from those affected landowners/occupants for purposes

of allowing soil vapor probe drilling, installation, and sampling on the Colony Park Town Houses property. As requested in the Water Board's response letter, soil vapor probes would be installed within 10 feet of associated townhome foundations, or as close as practicable given access constraints such as utilities, surface obstructions, and property owner consent.

Fieldwork Preparation Tasks

Prior to implementation of soil vapor probe installation, fieldwork preparation tasks will be completed, as summarized below:

- Prepare a Health and Safety Plan (HASP) that will address potential hazards associated with the field activities. The HASP will govern activities of ERM, subcontractors, and any other personnel present during field activities.
- Obtain soil vapor probe installation permits from the Contra Costa County Department of Environmental Health.
- Mark proposed soil vapor point locations and contact Underground Services Alert (USA) prior to initiation of intrusive activities. Coordinate with USA member companies to locate underground facilities in proximity to planned soil vapor probe locations.
- Scan each proposed drilling location for utilities using a private utility-locating company.
- Offset proposed drilling locations from any identified or suspected utilities and manually clear each borehole to a minimum depth of 5 feet below ground surface (bgs).

Soil Vapor Probe Installation and Sampling Activities

Soil vapor probe installation and sampling activities will be implemented in accordance with the July 2015 Soil Vapor Guidance and the 2011 Vapor Intrusion Guidance documents developed by the Cal EPA/DTSC.

The locations of proposed soil vapor probes are shown on Figure 1. The proposed soil vapor probes will be installed as two permanent pairs of nested shallow and deep soil vapor probes. As recommended by the DTSC guidance, the multiple depth intervals at each location will assist

in determining the soil vapor concentration gradients in the vicinity of residential structures.

Following preparation activities, a C-57 licensed drilling contractor will complete drilling and soil vapor probe installation activities. Each soil vapor probe location will be manually cleared with a hand auger to a minimum depth approximately 5 feet bgs, in accordance with ERM's subsurface utility clearance policies. Each boring will then be advanced to its final depth of approximately 15 feet bgs via a direct-push drill rig utilizing 3-inch-diameter direct-push rods. During drilling, soils will be continuously logged in accordance with the Unified Soils Classification System. In addition, soil will be screened for odors, visual staining, and vapors using an organic vapor meter equipped with a photoionization detector (PID) using an 11.7-electron-volt lamp. PID measurements will be collected by placing soil in zip-style plastic bags and measuring headspace concentrations. Soil descriptions and PID measurements will be included in boring logs.

During drilling, undisturbed soil geophysical samples will be collected from approximately 5 to 6 feet bgs from each soil vapor probe boring and submitted for tests to assist derivation of a site-specific human health risk TCE trigger value. Samples will be submitted to a California-certified laboratory for Vapor Intrusion Guidance-recommended parameters, including soil bulk and grain density, total porosity, bulk density, total organic carbon/fraction organic carbon, and volumetric moisture and air content analysis.

Based on the approximate depth of first encountered groundwater of 20 feet bgs, it is anticipated that each nested probe will consist of one deep probe at 15 feet bgs just above the water table, and one shallow probe at 7.5 feet bgs, consistent with the recommendations in the Soil Vapor Guidance document. Upon reaching the target probe depth, a 3-inch-long, 0.375-inch outer diameter, stainless steel soil vapor screen will be vertically centered in a 1-foot interval of standard sand pack. Teflon tubing (or equivalent) will be connected to the soil vapor screen and capped with a vapor-tight 2-way valve at the surface, eliminating the potential for barometric pressure fluctuations to induce vapor transport between the subsurface and the atmosphere. The 2-way valve will be installed in the closed position, allowing equilibration of soil vapor concentrations to commence immediately after installation.

A 6-inch interval of dry granular bentonite will be placed above the sand pack followed by neat cement grout to the depth of the next sample probe. Dry granular bentonite will be used to ensure that the grout seal does not infiltrate into the soil vapor probe. This process will be repeated for the shallow soil vapor screen. The surface of each multilevel probe cluster location will be fitted with a concrete cap and a flush-mounted, traffic-rated well box with sufficient room to store the tubing lines and valves.

The soil vapor probes will be sampled following the DTSC-required equilibration period of a minimum of 30 minutes, however sampling may be completed within a few days of installation during a separate mobilization. If the shallow probe installation depth must be installed shallower, within the 5-foot depth that was advanced via hand auger, the equilibration time will be extended to a minimum of 48 hours in accordance with DTSC Soil Vapor Guidance.

Soil vapor samples will be collected with 1-liter summa canisters equipped with flow controllers with a pre-set sampling rate of 200 milliliters per minute (mL/min). The following procedures will be followed during sample collection:

- Following the 30-minute equilibration time period, the sampling line will be tested for leaks by performing a shut-in leak test in accordance with the DTSC Soil Vapor Guidance.
- Three purge volumes of air will then be evacuated from the sampling line and sand pack vapor pore space at a flow rate of approximately 200 mL/min.
- Sample collection will begin once the leak test indicates leaks are not present in the sampling line. Leak detection tests will also be completed during each sample collection with the use of a tracer gas (isopropyl alcohol) to confirm the absence of leaks in the sampling line.

One soil vapor sample will be collected from each proposed probe. A duplicate sample and one ambient air sample will also be collected and analyzed for QA/QC purposes.

Sample Analysis

All samples will be submitted to ESC Lab Sciences of Mt. Juliet, Tennessee, for laboratory analysis of VOCs by USEPA Method TO-15 SIM. In addition, isopropyl alcohol will be reported to evaluate potential dilution of ambient air during into the sample containers during sampling.

Surveying

A California-registered land surveyor will survey the northing and easting coordinates for the soil vapor sampling locations in accordance with the requirements for California's GeoTracker database.

Decontamination and Investigation Derived Wastes

Downhole drilling equipment will be decontaminated between each drilling location by washing with non-phosphate detergent and rinsed with potable water. Sample containers, flow valves, and tubing will be dedicated to each sampling location and not re-used.

Soil cuttings wastes generated during drilling activities will be contained in 55-gallon Department of Transportation-approved steel drums and disposed following applicable state and federal regulations.

Subslab Vapor and Indoor Air Sampling Contingency

Soil vapor results will be reviewed and compared against the site-specific health risk-based value derived for TCE, as described above. If TCE is detected in the new shallow soil vapor probes above this value, the indoor air and subslab vapor sampling contingency task will be activated per Water Board Directive requirements. This contingency task consists of installation of subslab vapor probes and collection of indoor air and subslab vapor samples within the three western-most townhomes located on the northwestern side of the townhome/apartment complex, as shown on Figure 1.

If the contingency task is activated, access request letters will be prepared and submitted to the three homeowners and/or residential occupants requesting access to conduct indoor air sampling and subslab vapor probe installation and sampling activities. If required, access

approval will be obtained from additional parties to complete sampling for this contingency task. Following receipt of approved access letters, ERM will enter the residential units for those parties authorizing access to install subslab vapor probes and to collect indoor air samples.

To prepare for installation of subslab vapor probes, ERM subsurface clearance procedures will be followed as described earlier in this workplan. One subslab vapor probe will be installed within each accessed townhome being sampled for indoor air. However, subslab vapor probe locations will be contingent on homeowner and/or residential occupant approval. If approval is not granted to install probes in living spaces, subslab vapor probes may be installed in nearby common areas or walkways subject to obtaining access permission from the affected property owner/residential occupant. To facilitate subslab vapor probe installation, a small diameter hole will be drilled through the concrete slab. Vapor Pin™ or equivalent equipment will be used, and will be installed following manufacturer instructions. The Vapor Pins™ will be inserted into the concrete slab to create a flush vapor probe. A silicone sleeve will be fitted around the Vapor Pin™ to ensure vapors do not migrate through the annulus of the probe. Subslab vapor samples will be purged and sampled following the guidelines described above for soil vapor probes.

The scope of work described herein assumes that the foundations beneath the townhome/apartment complexes consist of slab-on-grade. If foundations instead include crawl spaces, crawl space air samples will be collected via Summa canisters instead of installing and sampling subslab vapor points, following the procedures described below.

Indoor air samples will be collected using 6-liter SUMMA canisters over a 24-hour period from the first floor, second floor (if present), and crawl space (if present) of each home. For quality assurance/quality control purposes, one duplicate sample will be collected for every 10 investigation samples, and one outdoor ambient air and trip blank sample will be collected per each day of sampling. All samples will be submitted to ESC Lab Sciences of Mt. Juliet, Tennessee, for laboratory analysis of VOCs by USEPA Method TO-15 SIM.

Indoor air samples will be collected following DTSC's October 2011 Vapor Intrusion Guidance. The building survey form and the building screening form (Appendices L and M from the Vapor Intrusion

Guidance) will be completed for each housing unit sampled for indoor air.

SCHEDULE AND REPORTING

ERM will initiate activities to obtain access from the appropriate parties within the townhomes/apartment complex (e.g., landowners, property manager, occupants) to install and sample soil vapor probes immediately after approval of this workplan. Soil vapor probe installation and sampling activities will be conducted within 8 weeks of obtaining the required access agreements.

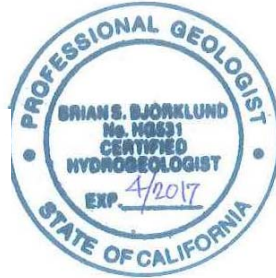
If TCE is not detected in the new soil vapor probes above the site-specific human health TCE trigger value, the indoor air sampling contingency will not be activated and ERM will begin preparation of the Vapor Intrusion Investigation Summary Report. The summary report will be submitted to the Water Board within 4 weeks of receipt of soil vapor results. The site-specific TCE human health trigger value will be calculated within 1 week of obtaining the geophysical soil results, and will be provided to the Water Board for reference.

If TCE is detected in the new soil vapor probes above the site-specific human health TCE trigger value, additional access permission will be sought from the appropriate parties with the townhome/apartment complex (e.g., landowners, property manager, occupants) to complete subslab vapor probe installation and sampling and indoor air sampling. Sampling activities will be completed within 2 months of obtaining access, pending obtaining of the required access and resident availability. Under the contingency, the Vapor Intrusion Investigation Summary Report will be submitted to the Water Board within 4 weeks of obtaining indoor air and subslab sampling results.

The summary report will include investigation procedures, tabular presentation of results, boring logs, sampling location and results figures, applicable updates to the site conceptual site model, interpretation of results, and recommendations. In addition, analytical data QA/QC will be assessed following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

If you have any questions regarding this report, please call
Brian Bjorklund at (925) 946-0455.

Sincerely,



Brian S. Bjorklund, P.G., C.H.G.
Partner

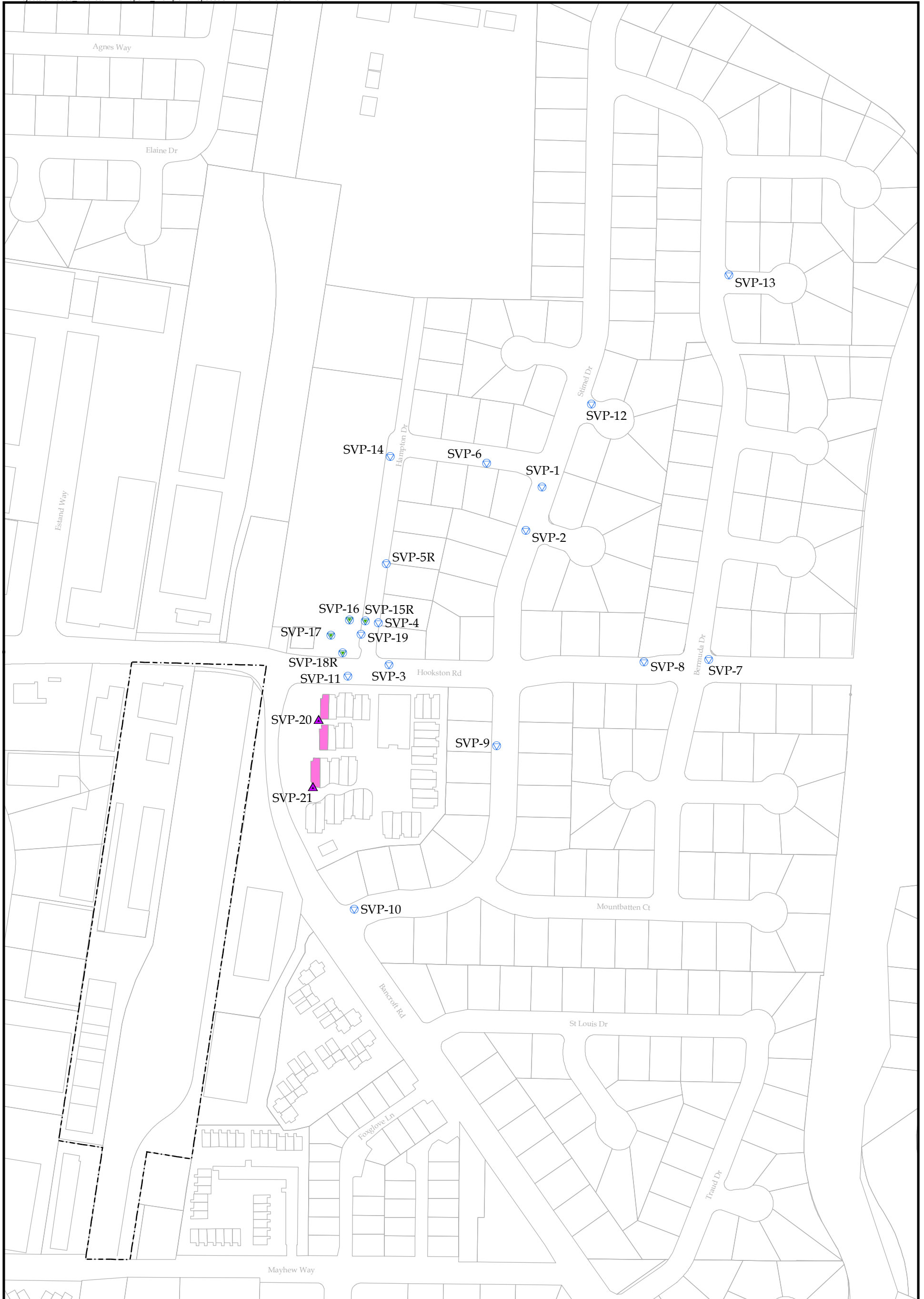
Isaac Pelz, P.G.
Project Manager

Enclosure: Figure 1

BSB/IP/cy/0113680

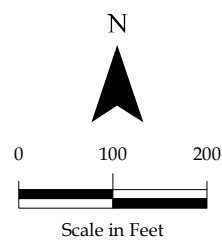
cc: Mr. Daniel Helix
Ms. Lauren Mancuso, UPRR
Ms. Maureen Toms, Contra Costa County

Figure



Legend

- ▲ Proposed nested soil vapor monitoring probes (7.5 ft and 15 ft below ground surface)
- Soil Vapor Monitoring Probe (5 ft Below Ground Surface)
- Nested Soil Vapor Monitoring Probe (5 ft and 10 ft Below Ground Surface)
- Proposed sub-slab vapor and indoor air sampling contingency locations within townhomes, pending owner approval and soil vapor monitoring results
- Parcel Boundaries
- - - Hookston Station Property Boundary



Hookston Station
Pleasant Hill, California

Figure 1
Existing and Proposed
Soil Vapor Probe Locations



PREPARED BY:
GS

JOB NO. 0113680
FILE: ProposedSVP

San Francisco Bay Regional Water Quality Control Board

March 10, 2017
File No: 07S0156 (RAL)

Union Pacific Railroad Company
Attn: Ms. Lauren Mancuso
1408 Middle Harbor Rd.
Oakland, CA 94607

Mr. & Mrs. Daniel C. Helix
Ms. Nancy Ellicock
Ms. Elizabeth Young
Mr. Steven Pucell
c/o Mr. Ray Rockwell

Contra Costa County Department of Conservation & Development
Attn: Ms. Maureen Toms
30 Muir Road
Martinez, CA 94553

Sent via e-mail to: LaMancus@up.com, Ray@rtllegal.com, Maureen.Toms@dcd.cccounty.us

**SUBJECT: Conditional Approval of Vapor Intrusion Investigation Workplan,
Hookston Station, 228 Hookston Road, Pleasant Hill, Contra Costa County**

Dear Messrs. Helix, Rockwell, and Pucell and Mses. Mancuso, Helix, Toms, Ellicock, and Young:

This letter responds to your December 16, 2016, *Vapor Intrusion Investigation Workplan* (Workplan) received February 16, 2017. I conditionally approve the Workplan and require you to submit a technical report with the results of the proposed investigation. The Workplan was submitted in compliance with our October 16, 2016 directive letter. The Workplan was required due to new information on Trichloroethene (TCE) toxicity and vapor intrusion concerns at certain residential units not adequately investigated.

Background

The Site is subject to Regional Water Board Order No. R2-2007-0009. This workplan requirement is not a task required in the Order. The above parties are named as responsible parties as described in the Order. Contra Costa County's Department of Conservation & Development was previously named in the Order as the Contra Costa County Redevelopment Agency.

Workplan Summary

The Workplan proposes the following work adjacent to and inside residences east of Bancroft Road and south of Hookston Road:

1. Installing and sampling two pairs of soil vapor probes to depths of 15 and 7.5 feet below ground surface (bgs) within about 10 feet of the residential buildings.
2. Collecting two soil samples for physical parameters from approximately 5 - 6 feet bgs.
3. Using a model and data from the soil samples and soil vapor to derive a site-specific human health risk TCE Trigger Level for vapor intrusion.

4. Collecting sub slab and indoor air samples from the three nearest residences if site-specific Trigger Levels determined in #3 above are exceeded.

Workplan Approval

I hereby approve the Workplan with the following conditions:

- Two soil samples from the same depth are not sufficient for assessing spatial variability. Page 14 of the *Interim Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region*¹ (Framework) suggests that at least three soil samples from each lithological layer should be analyzed for modeling and those samples should be collected at different lateral and vertical locations.
- Indoor air and sub slab sampling are required if soil vapor TCE levels near the building exceed 1,000 $\mu\text{g}/\text{m}^3$ for TCE (the residential Trigger Level in the Framework – see Figure 1, page 7). Soil vapor concentrations over the Trigger Level pose a threat of short-term toxicity (fetal heart defects); exposure for even a few days may cause this short-term toxicity. The site-specific attenuation factor between soil vapor and indoor air depends primarily on uniform subsurface conditions with no preferential pathways, not currently addressed in the Workplan's modeling proposal. Modeling consistent with soil vapor and indoor air data may be used to understand how subsurface conditions are affecting vapor transport to inform risk mitigation and potential remediation decisions. Use of the models, uncertainty, and sensitivity analysis are described starting on page 13 of the Framework.
- To check for seasonal variability, the newly installed soil vapor probes must be sampled on a semi-annual basis, and the results must be included with the monitoring program.
- Any indoor air samples must be collected from more than one location in each residential unit and at different seasons, due to spatial and temporal variability as described in the Framework.

Based on the above conditions you may directly sample indoor air based on exceedance of Trigger Levels in soil vapor. You may also evaluate using longer-term passive samplers to collect indoor air as they are less intrusive than six liter Summa canisters.

Report Requirement

The responsible parties listed above must submit a report by **May 31, 2017**, documenting the implementation of the Workplan as conditionally approved.

This requirement for a technical report is made pursuant to Water Code Section 13267, which allows the Regional Water Board to require technical or monitoring program reports from any person who has discharged, discharges, proposes to discharge, or is suspected of discharging waste that could affect water quality. The attachment provides additional information about Section 13267 requirements. Any extension in the above deadline must be confirmed in writing by Regional Water Board staff.

In addition to a hard copy you are also required to submit all documents in electronic format to the State Water Resources Control Board's GeoTracker database. Guidance for electronic information submittal is available at:

¹ See the Regional Water Board webpage:

http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/sitecleanup/TCE_Interim_VI_Framework.pdf

http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/. Please note that this requirement includes all analytical data, monitoring well latitudes, longitudes, and elevations, water depths, Site maps, boring logs (PDF format), and complete copies of reports and correspondence including the signed transmittal letters and professional certifications (PDF format). All reports submitted must have the Regional Water Board file number 07S0156 on the first page of the report.

Please direct all questions and correspondence regarding this matter to Mr. Ralph Lambert at (510)-622-2382 or e-mail: RALambert@waterboards.ca.gov.

Sincerely,

Bruce H. Wolfe
Executive Officer

Attachment: Fact Sheet – Requirements for Submitting Technical Reports Under Section 13267 of the California Water Code

Copy sent via email with attachment:

ERM

Attn.: Mr. Brian Bjorklund

Email: Brian.Bjorklund@erm.com

ERM

Attn.: Mr. Isac Pelz

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Contra Costa County Public Works Department

Attn.: Ms. Carrie Ricci

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Contra Costa County Health Services Department

Attn.: Mr. Alex McMullen

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San Francisco Bay Regional Water Quality Control Board

Sheet – Requirements for Submitting Technical Reports Under Section 13267 of the California Water Code

What does it mean when the Regional Water Board requires a technical report?

Section 13267¹ of the California Water Code provides that “...the regional board may require that any person who has discharged, discharges, or who is suspected of having discharged or discharging, or who proposes to discharge waste...that could affect the quality of waters...shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires.”

This requirement for a technical report seems to mean that I am guilty of something, or at least responsible for cleaning something up. What if that is not so?

The requirement for a technical report is a tool the Regional Water Board uses to investigate water quality issues or problems. The information provided can be used by the Regional Water Board to clarify whether a given party has responsibility.

Are there limits to what the Regional Water Board can ask for?

Yes. The information required must relate to an actual or suspected or proposed discharge of waste (including discharges of waste where the initial discharge occurred many years ago), and the burden of compliance must bear a reasonable relationship to the need for the report and the benefits obtained. The Regional Water Board is required to explain the reasons for its request.

What if I can provide the information, but not by the date specified?

A time extension may be given for good cause. Your request should be promptly submitted in writing, giving reasons.

Are there penalties if I don't comply?

Depending on the situation, the Regional Water Board can impose a fine of up to \$5,000 per day, and a court can impose fines of up to \$25,000 per day as well as criminal penalties. A person who submits false information or fails to comply with a requirement to submit a technical report may be found guilty of a misdemeanor. For some reports, submission of false information may be a felony.

Do I have to use a consultant or attorney to comply?

There is no legal requirement for this, but as a practical matter, in most cases the specialized nature of the information required makes use of a consultant and/or attorney advisable.

What if I disagree with the 13267 requirements and the Regional Water Board staff will not change the requirement and/or date to comply?

You may ask that the Regional Water Board reconsider the requirement, and/or submit a petition to the State Water Resources Control Board. See California Water Code sections 13320 and 13321 for details. A request for reconsideration to the Regional Water Board does not affect the 30-day deadline within which to file a petition to the State Water Resources Control Board.

If I have more questions, whom do I ask?

Requirements for technical reports include the name, telephone number, and email address of the Regional Water Board staff contact.

Revised January 2014

¹ All code sections referenced herein can be found by going to www.leginfo.ca.gov