ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
REBECCA GEBHART, Interim Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL OVERSIGHT PROGRAM (LOP)
For Hazardous Materials Releases
1131 HARBOR BAY PARKWAY, SUITE 250
ALAMEDA, CA 94502
(510) 567-6700
FAX (510) 337-9335

June 29, 2017

Neishi Brothers Nursery
c/o: Dan S. Neishi Trust &
Mitsugi Neishi Heirs of Estate et al.
357 105th Avenue
Oakland, CA 94603

Subject: Request for Work Plan, Fuel Leak Case No. RO0003156 and GeoTracker Global ID T10000006426, Neishi Brothers Nursery, 357 105th Avenue, Oakland, CA 94603

Dear Neishi Brothers Nursery:

Alameda County Department of Environmental Health (ACDEH) staff has reviewed the case file for the subject site including the *Groundwater Investigation Report, Well Survey, and Request for Closure* (RFC), dated August 26, 2016, and prepared by Almar Environmental on your behalf. The RFC presents grab groundwater sampling results from three soil borings in order to further define the extent of groundwater contamination at the site. The RFC also evaluates the site using criteria from the State Water Resources Control Board (State Water Board) Low-Threat Underground Storage Tank Closure Policy (LTCP). Based on the LTCP evaluation performed by Almar Environmental, the RFC recommends case closure.

ACDEH has evaluated the data and recommendations presented in the above-mentioned report as well as the case file. Based on our staff review, we have determined that this case is not eligible for closure, as the site fails to meet the LTCP General Criteria for Site Conceptual Model (SCM), and the Media-Specific Criteria for Groundwater, Vapor Intrusion to Indoor Air, and Direct Contact.

Therefore, at this juncture ACDEH requests that you prepare a Data Gap Site Investigation Work Plan (Work Plan) to address the Technical Comments provided below.

TECHNICAL COMMENTS

1. **LTCP General Criteria e (Site Conceptual Model).** According to the LTCP, the SCM is a fundamental element of a comprehensive site investigation. The SCM establishes the source and attributes of the unauthorized release, describes all affected media (including soil, groundwater, and soil vapor as appropriate), describes local geology, hydrogeology and other physical site characteristics that affect contaminant environmental transport and fate, and identifies all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). The SCM is relied upon by practitioners as a guide for investigative design and data collection. All relevant site characteristics identified by the SCM shall be assessed and supported by data so that the nature, extent and mobility of the release have been established to determine conformance with applicable criteria in this policy.

   ACDEH's review of the case files indicates that insufficient data and analysis has been presented to assess the nature, extent, and mobility of the release and to support compliance with General Criteria e. Please update the SCM presented in the *Revised Soil, Water, and Soil Gas Investigation Workplan and Site Conceptual Model* prepared by Almar

and dated July 20, 2015 and include in the requested Work Plan to support the proposed scope of work.

a. **Utility Survey-** ACDEH requests that a utility survey be performed that includes an evaluation of all existing utility lines on the site and within the groundwater plume boundaries. This element of the SCM is a critical component in evaluation of the potential for soil vapor to migrate along preferential pathways from the contaminant source areas in the vicinity of the former dispenser and underground storage tank (UST) where soil gas concentrations are above LTCP soil gas media specific criteria to the residential structure located approximately 30 feet north of the source areas and other enclosed structures at the site.

b. **Well Survey-** A directive from ACDEH dated June 28, 2016, requested that a well survey be completed using records from both Alameda County Public Works Agency (ACPWA) and the California Department of Water Resources (DWR). A water supply well survey using the ACPWA database only was included in the RFC. The survey identified one on-site well and two downgradient off-site wells within a 1,000 foot radius of the site. The RFC stated that the on-site well was used by the former on-site nursery as a water source for irrigation and recommended that this well be destroyed so that the site could qualify for closure.

   Before the well can be destroyed and the site can be considered for closure, please evaluate whether or not the on-site well is a potential vertical conduit for cross-contamination. Based on our communication with ACPWA, it appears that this agency does not have well construction information for the on-site well. Therefore, besides performing a well survey using the DWR database, ACDEH requests that a well construction log be obtained from DWR. If well construction details are not available, then we request that a video log be performed. In addition, we request that a sample be collected from the on-site well and the two offsite wells and analyzed for the following: Total Petroleum Hydrocarbons as gasoline (TPH-g) and diesel (TPH-d); benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl *tert*-butyl ether (MtBE); and naphthalene.

   In addition to having an area map showing all supply well locations in the requested Work Plan, the site map figure should include the location of the on-site well.

c. **Land Use(s) and Exposure Scenarios at the Site and Adjacent Properties -** ACDEH understands that the current land use at the site is mixed use with a commercial nursery and associated structures (greenhouses, garage, covered beds, etc.), a residence and paved parking areas. Reports in the case file state that the site may be redeveloped in the future with residential structures however no redevelopment plans have been submitted to ACDEH and thus the site must be evaluated to its current land use (residential/commercial). To facilitate a better understanding of the site and aid in determination of the appropriate screening levels, ACDEH requests that a site map figure with the entire site boundary, and the entire parcel's buildings and their use identified, as well as a map showing the adjacent downgradient and cross-gradient

parcels, and the buildings on the parcels and their use identified be included in the SCM.

d. **Hydrogeology -** The RFC and previous reports and work plans in the case file state groundwater flow direction to be west/southwest towards the San Francisco Bay and San Leandro Creek based on topography. Additionally, the site has been characterized as having confined groundwater conditions based on boring log lithology (coarser grained material overlain by silty clay) and observations of first encountered groundwater ranging from 9.0 feet below ground surface (bgs) to 13 feet bgs and subsequent higher static groundwater levels varying from 3.90 feet bgs to 11.0 feet bgs. Sufficient data has not been presented in the SCM to support the conclusion that the groundwater is confined at the site and provide an explanation for the disparate values of static groundwater levels (3.90 to 11.0 feet bgs). Please update the SCM with cross sections showing lithology based on boring logs, locations of borings and samples depths, location of the former dispenser and UST and depths of the backfilled tank pit, wells identified in the well survey, first encountered and static water levels, utilities, etc. to aid in the evaluation of risk to sensitive receptors.

2. **LTCP General Criteria f (Secondary Source) -** The LTCP defines "secondary source" as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Unless site attributes prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable as described herein. "To the extent practicable" means implementing a cost-effective corrective action which removes or destroys-in-place the most readily recoverable fraction of source-area mass. According to the LTCP, following removal or destruction of the secondary source, additional removal or active remedial actions shall not be required by regulatory agencies unless (1) necessary to abate a demonstrated threat to human health or (2) the groundwater plume does not meet the definition of low threat as described in this policy."

   ACDEH's review of the case files indicates that secondary source material remains in the tank pit bottom and sidewalls and is the source of groundwater and soil gas petroleum hydrocarbon impacts. Additionally, although the lateral extent of soil impacts appears to be defined in the tank pit area the vertical extent of contamination in the tank pit has not been defined. Due to the commercial/residential land use at the site, the documentation of an onsite water well and 2 offsite water wells located within 1,000 feet of the site, and elevated concentrations of total petroleum hydrocarbons constituents in groundwater and soil gas in the vicinity of the former UST and dispenser it appears appropriate to vertically delineate the secondary source material remaining in the tank pit and prepare a plan to remove the secondary source material to the maximum extent practicable.

3. **Groundwater Media-Specific Criteria.** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed in the policy.

According to the RFC, the site meets scenario 1 of the Groundwater Media-Specific Criteria stating that the plume is fully defined and less than 100 feet in length, and that its boundary is greater than 250 feet from the existing water supply well or surface water body. However, our review of the case files indicates that insufficient data and analysis has been presented to support the requisite characteristics of plume definition and stability, as well as the plume proximity to water supply wells and surface water bodies. A discussion of our review and request for further data is as follows:

a. **Plume Length and Lateral Extent Definition** -The lateral extent of the petroleum hydrocarbon plume has not been delineated to water quality objectives as discussed below.

   i. **TPHg** – The lateral plume extent has not been defined for TPH-g due to the use of a laboratory detection limits for the analyses of groundwater samples collected at the most eastern, northeastern, southeastern and southern borings (DP-3, DP-1, DP-7 and DP-8, respectively) which exceed the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels (ESLs) for fresh water aquatic habitat, direct exposure human health risk and drinking water odor nuisance levels of 440 µg/L, 220 µg/L, and 100 µg/L respectively. For the laboratory analyses of groundwater samples collected at the most downgradient boring (DP-8), a detection limit of 620 micrograms/liter (µg/L) TPH-g was used while a detection limit of 500 µg/L was used for the analyses of groundwater samples DP-3, DP-1, and DP-7.

   ii. **TPHd** - The lateral plume extent has not been defined for TPH-d due to the use of laboratory detection limits (ranging from 200 µg/ to 2,900 µg/L) for the analyses of groundwater samples collected from borings DP-1 through DP-8 that exceed the ESLs for direct exposure human health risk of 150 µg/L and the drinking water odor nuisance levels of 100 µg/L. Additionally, although the UST was reportedly used to store TPH-d and diesel was detected at a concentration of 400 µg/L in the sample collected from boring DP-2, it was not included in the suite of analysis for groundwater samples collected from borings DP-9 through DP-11 that were advanced to delineate the western and northwestern edge of the contaminant plume.

   iii. **Ethylbenzene and Napthalene** - The lateral plume extent has not been defined for ethylbenzene and naphthalene north of boring DP-2 where groundwater samples had concentrations of 220 µg/L ethylbenzene and 150 µg/L naphthalene.

   Therefore, please present a strategy in the requested Work Plan to collect additional groundwater data for TPH-g, TPH-d, ethylbenzene and napthalene in order to determine whether or not the site satisfies the Groundwater Media-Specific Criteria by defining the plume limits to water quality objectives.

b. **Distance to Water Supply Well or Surface Water Body from Defined Plume Boundary.** Because the TPH-g and TPH-d plume boundaries have not been defined, as discussed above, the distance between the boundaries and the nearest off-site water supply wells

and surface water body cannot yet be determined. As noted previously, ACDEH requests further groundwater sampling to better define the plume and a well survey that uses the DWR database.

4. **Vapor Intrusion to Indoor Air Media Specific Criteria.** The LTCP describes conditions, including bioattenuation zones, which if met will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks to human occupants of existing or future site buildings, and adjacent parcels. Appendices 1 through 4 of the LTCP criteria illustrate four potential exposure scenarios and describe characteristics and criteria associated with each scenario.

   The RFC states that the site appears to meet the criteria of Scenario 4, Appendix 4, of the LTCP. However, ACDEH's review of the case files indicates that the site data and analysis fail to support the requisite characteristics of Scenario 4 and use of bioattentuation zone soil gas screening levels.

   Four temporary soil gas probes have been installed at the site in the vicinity of the source area and one round of soil gas samples collected. Probe SG-1 was installed between boring DP-2 and the eastern end of the former tank pit adjacent to sample EAST-7.5; probe SG-2 was installed adjacent to DP-4; probe SG-3 was installed adjacent to DP-5; and probe SG-4 was installed in the vicinity of the former dispenser near sample DISP-3. Benzene concentrations in soil gas samples collected from SG-1 (3,800 µg/m^3), SG-2 (5,900 µg/m^3) and SG-4 (18,000 µg/m^3) exceed both the commercial and residential LTCP soil gas criteria (no bioattenuation zone) of 85 µg/m^3 and 280 µg/m^3, respectively. The ethylbenzene concentration in the soil gas sample collected from SG-4 (5,400 µg/m^3) exceeds the LTCP criteria of 1,100 µg/m^3 (residential) and 3,600 µg/m^3 (commercial). Naphthalene concentrations for samples collected from all four soil gas probes were reported as non-detects however the laboratory reporting limits were above the residential and commercial LTCP soil gas criteria. Additionally, TPHg concentrations in soil gas samples collected from probes SG-2 (340,000 µg/m^3) and SG-4 (680,000 µg/m^3) exceed the residential soil gas ESLs of 300,000 µg/m^3.

   In accordance with the LTCP criteria the no bioattenuation zone criteria apply unless the requirements for a bioattenuation zone are established. Although oxygen concentrations are greater than 4% (measured at the bottom of the 5-foot zone) in the four soil gas samples, sufficient data has not been presented to support 5 feet of unsaturated soil with TPH (gas and diesel) concentrations less than 100 mg/kg (measured in at least two depths within the five-foot zone). Additionally, ACDEH notes that soil gas sampling point SG-4 was collected only at 3 feet bgs, and not at requisite 5 vertical feet.

   Therefore, we request that you present a strategy in the requested Work Plan to collect additional data to support the use of bioattenuation screening levels including collection of an adequate number of soil samples within the 5 foot zone for TPHg and TPHd analysis. Additionally, based on soil gas sample data collected in the contaminant source areas it appears warranted to conduct step out sampling to define the lateral extent of the soil vapor plume. The sampling strategy should include the installation of soil gas probes adjacent to residential structure located within 30 feet of the contaminant source area and any other enclosed site structures located within 100 feet of the groundwater plume and along utilities

corridors. Probes installed adjacent to site structures must be installed to a depth of 5 feet below the bottom of the foundation.

5. **Direct Contact and Outdoor Air Media Specific Criteria** – The LTCP describes conditions where direct contact with contaminated soil or inhalation of contaminants volatized to outdoor air poses a low threat to human health. According to the policy, sites shall be considered low-threat if the maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs). Alternatively, the policy allows for a site specific risk assessment that demonstrates that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health, or controlling exposure through the use of mitigation measures, or institutional or engineering controls.

   Our review of the case files indicates that insufficient data and analysis has been presented to satisfy the media-specific criteria for direct contact and outdoor air exposure. Soil samples (EAST-7.5 and WEST-8) collected below/at the base of the former tank did not include naphthalene in the suite of analysis however naphthalene has been detected in other soil samples collected at the site. Additionally, no samples were collected in the sidewalls of the tank pit in the 0 to 5 foot interval. Therefore, we request that you present a strategy in the requested Work Plan to collect sufficient data at appropriate intervals to satisfy the direct contact and outdoor air exposure criteria in the tank pit area. We recommend these samples be collected in conjunction with the collection of soil samples to define the vertical extent of secondary source material in the tank pit.

GEOTRACKER COMPLIANCE

A review of the State Water Board's Geotracker Website indicates requisite information has not been uploaded including laboratory analytical data in electronic deliverable format (edf), boring logs, site maps, etc. Please upload the requisite data and submit documentation certifying successful upload of the data in accordance with the timeline presented below.

SUBMITTAL ACKNOWLEDGEMENT STATEMENT

Please note that ACDEH has updated Attachment 1 with regard to report submittals to ACDEH. ACDEH will now be requiring a submittal Acknowledgment Statement, replacing the Perjury Statement, as a cover letter signed by the Responsible Party (RP). The language for the Submittal Acknowledgement Statement is as follows:

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's Geotracker Website.

Please make this change to your future submittals to ACDEH.

TECHNICAL REPORT/DATA REQUEST

Please submit technical reports to ACDEH (Attention: Dilan Roe), according to Attachment 1 and the following naming convention and schedule:

- **July 28, 2017** – Geotracker Compliance Certification
  (File to be named: GEOT_COMP_yyyy-mm-dd)

- **August 25, 2017** – Data Gap Site Investigation Work Plan
  (File to be named: WP_R_yyyy-mm-dd)

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. The California Code of Regulations Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm.

If you have any questions or concerns regarding this correspondence or your case, please call me at (510) 567-6767 or send me an electronic mail message at dilan.roe@acgov.org.
Sincerely,

Dilan Roe

Dilan Roe, PE.
Chief – Land Water Division

Attachments: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACDEH Electronic Report Upload (ftp) Instructions

cc: Forrest Cook, Almar Environmental, 407 Almar Avenue, Santa Cruz, CA 95060 (*Sent via E-mail to: cook.forrest@gmail.com*)

Paresh Khatri, ACDEH (*Sent via E-mail to: paresh.khatri@acgov.org*)

Dilan Roe, ACDEH (*Sent via E-mail to: dilan.roe@acgov.org*)

GeoTracker, eFile

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to deh.loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.