

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

INVESTIGATIVE ORDER NO. R9-2023-0218

**AN ORDER DIRECTING NBM KACHI LLC TO SUBMIT TECHNICAL AND
MONITORING REPORTS PERTAINING TO AN INVESTIGATION AT
5739-5799 EL CAJON BOULEVARD,
SAN DIEGO, CALIFORNIA**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds that:

1. **LEGAL AND REGULATORY AUTHORITY.** This Investigative Order (Order) conforms to and implements (1) policies and requirements of the Porter-Cologne Water Quality Control Act (division 7, commencing with Water Code section 13000) including sections 13267 and 13304; (2) applicable state and federal regulations; (3) all applicable provisions of statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Water Board) and the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) adopted by the San Diego Water Board including beneficial uses, water quality objectives, and implementation plans; (4) State Water Board policies and regulations, including Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*; Resolution No. 88-63, *Sources of Drinking Water*; Resolution No. 92-49, *Policies and Procedures for Investigation, and Cleanup and Abatement of Discharges under Water Code Section 13304*; California Code of Regulations (Cal. Code Regs.) title 23, chapter 16, article 11; Cal. Code Regs., title 23, section 3890 et seq.; and (5) relevant standards, criteria, and advisories adopted by other state and federal agencies.
2. **DISCHARGE OF WASTES.** Businesses conducted laundry and dry cleaning operations at the 5799 El Cajon Boulevard property (former dry cleaner property) in San Diego County from 1943 to 1970.¹ Operators of these historical dry cleaning operations used tetrachloroethene (PCE), which is a common dry cleaning solvent. Historical investigation reports² indicate that groundwater, soil, and sub-slab soil

¹ Partner Engineering and Science Inc. 2016. Phase I Environmental Site Assessment Report prepared for San Diego Commercial & Business Financing. September 2. Available at the following webpage:
https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/3648098289/T10000013945.PDF

² Groundwater and soil sample results are reported in the June 28, 2017, Partner Engineering and Science Inc. Drilling Report for Soil Boring Permit Number DEH2016-

vapor samples collected at and near the adjacent parking area south of the former dry cleaner property (Figure 1) contained PCE and PCE degradation products (e.g., trichloroethene (TCE), vinyl chloride, and cis-1,2-dichloroethene (cis-1,2-DCE)). Additional documentation³ indicates that PCE, TCE, and other toxic vapor-forming chemicals were detected in indoor air samples at the former dry cleaner property and properties to the west, at 5795, 5739, and 5741⁴ El Cajon Boulevard (Figure 1). Historical sub-slab vapor data indicates that elevated concentrations of PCE may also be present in soil vapor beneath properties east and south of the former dry cleaner property. These properties are shown on Figure 1 and consist of residences across 58th Street to the east and at 4478 and 4480 58th Street to the south. Historical investigation reports proposed that PCE entered the environment by unauthorized releases (i.e., spills) to surface soils. The Board considers PCE, TCE, and other toxic vapor-forming chemicals found in groundwater, soil, sub-slab soil vapor, and indoor air to be wastes, as defined in Water Code section 13050(d).

The maximum concentrations of wastes detected in sub-slab soil vapor, groundwater, and indoor air samples at the 5739-5799 El Cajon Boulevard properties are shown in Tables 1 through 3 below, respectively.

LMWP-002637. 2017. Available at the following webpage:

https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/8240545451/T10000013945.PDF

Sub-slab soil vapor results reported in the June 28, 2016, Converse Consultants Report Soil Vapor Screening Report prepared for Opus Bank. Available at the following webpage:

https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/1159856975/T10000013945.PDF

³ Sharp Environmental Technologies (SET). 2021. Indoor Air Sampling and Vapor Intrusion Evaluation and Human Health Risk Assessment Report (Amended). July 22. Available at the following webpage:

https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/3624308705/T10000013945.PDF

⁴ The 5741 El Cajon Boulevard property is located above the 5739 El Cajon Boulevard property, on the second floor of the structure.

Table 1. Sub-slab Soil Vapor Maximum and Screening-Level Concentrations

Constituent ⁵	Maximum Sub-slab Soil Vapor Concentration (2016) in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)	Residential Screening Level ⁶ ($\mu\text{g}/\text{m}^3$)	Commercial/Industrial Screening Level ⁶ ($\mu\text{g}/\text{m}^3$)
PCE	43,900⁷	15	67
TCE	1,380	17	100
cis-1,2-DCE	4,880	277	1,167
Vinyl Chloride	6.71	3	5
Chloroform	14	4	17

⁵ Analytes reported in this table only include analytes detected above the Department of Toxic Substances Control (DTSC) screening levels (SLs), not all detected analytes.

⁶ SLs for sub-slab soil vapor are estimated by dividing the corresponding indoor air SLs in DTSC 2020^a Note 3 and accelerated response action levels in DTSC 2014^b Note 5 by the OSWER 2015 Vapor Intrusion Technical Guide-recommended attenuation factor (0.03).^c

^a DTSC, Human and Ecological Risk Office. 2020. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels (DTSC-SLs). June. Available at the following website: <https://dtsc.ca.gov/wp-content/uploads/sites/31/2019/04/HHRA-Note-3-June-2020-A.pdf>.

^b DTSC. 2014. Human and Ecological Risk Office Human Health Risk Assessment (HHRA) Note Number 5: Health-based Indoor Air Screening Criteria for Trichloroethylene (TCE). August 23. Available at the following website: <https://dtsc.ca.gov/wp-content/uploads/sites/31/2021/07/HHRA-Note-5-23-Aug-2014-2021-A.pdf>.

^c U.S. EPA Office of Solid Waste and Emergency Response. 2015. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. June. Available at the following website: <https://www.epa.gov/sites/default/files/2015-09/documents/oswer-vapor-intrusion-technical-guide-final.pdf>.

⁷ Values in bold are above applicable SLs.

Table 2. Groundwater Maximum, Calculated Indoor Air, and Indoor Air Screening-Level Concentrations

Constituent ⁸	Maximum Groundwater Concentration (micrograms per liter, 2017)	Calculated Indoor Air Concentration ⁹ (µg/m ³)	Residential Screening Level (µg/m ³)	Commercial /Industrial Screening Level (µg/m ³)
PCE	67	48.2	0.46 ¹⁰	2 ⁹
TCE	16	6.4	0.5 ¹¹	3 ¹⁰
cis-1,2-DCE	2,100	357	8.3 ⁹	35 ⁹

⁸ Analytes reported in this table only include analytes detected above the DTSC SLs, not all detected analytes.

⁹ Indoor air concentrations derived from groundwater concentrations and calculated using the equation of page 17 of the October 2011 *Vapor Intrusion Guidance* and the OSWER Vapor Intrusion Technical Guide-recommended attenuation factor of 0.001. The San Diego Water Board staff included these values because soil vapor data from the property have not been collected.

¹⁰ SL from DTSC (2020).²

¹¹ Accelerated response action level from DTSC (2014).

Table 3. Indoor Air Maximum and Screening-Level Concentrations

Constituent	Maximum Indoor Air Concentration (2021) ($\mu\text{g}/\text{m}^3$)	Residential Screening Level ($\mu\text{g}/\text{m}^3$)	Commercial/Industrial Screening Level ($\mu\text{g}/\text{m}^3$)
Benzene	1.33 ¹² (R) ¹³ 1.70 (C) ¹³	0.097	0.42
Carbon Tetrachloride	0.643 (R) 0.598 (C)	0.47	2.0
Chloroform	0.486 (R) 0.303 (C)	0.12 ¹⁴	0.53 ¹⁴
Ethylbenzene	1.65 (R) 2.09 (C)	1.1 ^c	4.9 ¹⁴
Methylene Chloride	14.9 (R) 4.80 (C)	1.0	12
PCE	0.55 (R) 1.35 (C)	0.46 ¹⁵	2.0 ¹⁴
TCE	0.10 (R) 0.28 (C)	0.48 ¹⁴	3.0 ¹⁶
1,2-dichloroethane (1,2-DCA)	0.135 (R) 0.207 (C)	0.11 ¹⁴	0.47 ¹⁴

3. **SITE DEFINITION.** The former dry cleaner property is a commercial property, currently operating as an insurance company called Alia Auto Insurance. The 5795 El Cajon Boulevard property is a commercial property operating as a church. The 5739 El Cajon Boulevard property is a commercial property operating as a grocery

¹² Values in bold are above applicable SLs.

¹³ (R) = residential unit; (C) = commercial unit

¹⁴ U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) (2021).^a

^a U.S. EPA RSLs. 2021. May. Available at the following website:

<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

¹⁵ SL from DTSC (2020).

¹⁶ Accelerated response action level from DTSC (2014).

store called Randy's Mini Market. The 5741 El Cajon Boulevard property is composed of four second-floor residential units occupied by tenants. Wastes detected adjacent to, underneath, and inside these properties (Finding 2) are present at concentrations that indicate a risk to human health from inhalation of toxic vapors. Investigations are required to define the extents of the contamination and to quantify the environmental and human health impacts. This Order defines the term "site" as the properties currently and/or potentially impacted by the contamination plumes. The aerial extent of the site is therefore determined by the lateral and vertical extent of the contamination by wastes in all media (i.e., soil vapor, sub-slab soil vapor, indoor air, groundwater, and soil).

4. **PERSONS RESPONSIBLE FOR THE DISCHARGE OF WASTE.** NBM Kachi LLC (Discharger) is the current owner of the properties listed in Finding 3 and is responsible for the discharged wastes.¹⁷ The Discharger voluntarily performed preliminary investigative work at the site from 2020 to 2021 in collaboration with the San Diego Water Board. The Discharger is also working with the State Water Board and applied for a Site Cleanup Subaccount Program grant.
5. **GROUNDWATER BENEFICIAL USES AT THE SITE LOCATION.** The site is located within the Chollas Hydrologic Subarea (908.22) in the San Diego Mesa Hydrologic Area (908.20) of the Pueblo San Diego Hydrologic Unit (908.00). The Basin Plan does not designate beneficial uses for groundwater in the San Diego Mesa Hydrologic Area.
6. **HUMAN HEALTH IMPACTS.** Wastes detected in indoor air at the site are present at concentrations that may pose a health risk to site occupants. When inhaled, these chemicals have long-term cancer risks as well as short-term non-cancer hazards. PCE and TCE are known to cause cancer in humans. Studies of dry cleaning workers exposed to PCE have shown associations between exposure to PCE and several types of cancer, specifically bladder cancer, non-Hodgkin's lymphoma, and multiple myeloma. Some toxicological information suggests that TCE is of concern for sensitive and vulnerable populations, particularly women of reproductive age, and poses a short-term risk for non-cancer effects. As the site is in a non-beneficial use area for groundwater, the Order is being issued to address risk to human health through inhalation of toxic vapors.
7. **CONDITION OF NUISANCE.** Nuisance, as defined in Water Code section 13050 (m), is anything that meets all of the following requirements: (1) is injurious to health,

¹⁷ *Tesoro Refining & Marketing Co. LLC v. Los Angeles Regional Water Quality Control Bd.* (2019) 42 Cal.App.5th 453. Precedential State Water Board Orders have found that the discharge of waste includes the passive migration of waste, and that the owner of a polluted site causes or permits a discharge even if the owner did not own the property at the time of the initial release. The discharge continues as long as wastes remain in the soil and groundwater (State Water Board Orders WQ 86-2 (Zoecon Corporation); WQ 89-1 (Schmidl); and WQ 89-8 (Spitzer)).

or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and (3) occurs during, or as a result of, the treatment or disposal of wastes. Concentrations of wastes measured at the site are a nuisance because they may pose a health risk to people that work and/or live in properties at the site as described in Finding 6.

8. **INDOOR AIR SAMPLING.** The Discharger, at the request of the San Diego Water Board, conducted an indoor air sampling event at the site during the week of January 11, 2021. SET supervised the collection of indoor air samples taken at the commercial and residential units of the site and analyzed the samples for the list of analytes for EPA Method TO-15. Indoor air sampling results submitted to the Board on March 8, 2021, were missing the ambient air sample and an indoor air sample from one of the residential units at 5741 El Cajon Boulevard. Board staff noted that doors were left open during sampling at the former dry cleaner unit and requested to re-sample that location and collect the missing air samples. Re-sampling occurred the week of May 3, 2021, but doors were again left open during sampling. Therefore, the data used in the human health risk assessment presented to the Board following indoor air sampling events may not be representative of the most conservative site usage scenario and the Board will require additional sampling to confirm maximum concentrations.
9. **BASIS FOR REQUIRING TECHNICAL AND MONITORING REPORTS.** Water Code section 13267 provides that the San Diego Water Board, in conducting an investigation, may require dischargers, past dischargers, or suspected dischargers to furnish, under penalty of perjury, those technical or monitoring program reports as the Board may specify, provided that the burden, including costs, of these reports bears a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
10. **NEED FOR AND BENEFIT OF TECHNICAL AND MONITORING REPORTS.** Technical reports and monitoring program reports are needed to provide information to the San Diego Water Board regarding (a) the nature and extent of the discharge, (b) the nature and extent of nuisance conditions in state waters created by the discharge, (c) the potential for vapor risk to human health as a result of the discharge, and (d) the evaluation of whether cleanup or abatement measures are required to address the discharge with adoption of cleanup levels consistent with State Water Board Resolution No. 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under California Water Code Section 13304* (Cleanup and Abatement Policy). The reports will enable the Board to determine the vertical and lateral extents of the discharge and provide technical information to determine what measures are necessary to protect human health and the environment. Based on the nature and potential consequences of the discharge (as described in the Findings above), the burden of providing the required reports, including the costs, bears a reasonable relationship to the need for the reports, and

the benefits to be obtained from the reports.

Table 4 provides the estimated costs associated with implementation of the directives included in this Order.

Table 4. Estimated Implementation Costs

Task	Estimated Cost Range¹⁸
Work Plan ¹⁹	\$11,100 – \$14,700
Field Work ²⁰	\$101,000 – \$127,000
Laboratory Analysis, Materials, and Supplies ²	\$134,500 – \$156,500
Report Preparation ²	\$45,300 – \$56,100
Estimated Total	\$291,900 – \$354,300

11. **CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE.** This action is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with section 15061(b)(3) of Cal. Code Regs. title 14, chapter 3, because it can be seen with certainty that there is no possibility that the collection of soil vapor, indoor air, soil, and groundwater samples will have a significant effect on the environment. CEQA will be complied with as necessary when and if remedial actions are proposed.
12. **COST RECOVERY.** Pursuant to Water Code section 13304(c), and consistent with other statutory and regulatory requirements, including but not limited to Water Code section 13365, the San Diego Water Board is entitled to, and will seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this or a subsequent Order. Upon receipt of invoices, and in accordance with instruction therein, the Discharger must reimburse the Board for all reasonable costs incurred by the Board to investigate discharge of waste and to oversee cleanup of such waste, abatement

¹⁸ The San Diego Water Board developed these cost estimates using information provided by industry consultants as well as Water Board estimates

¹⁹ Applies to Directive A of the Order.

²⁰ Applies to Directive B of the Order.

of the effects thereof, or other remedial action, required by this Order and consistent with the estimation of work.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13267 and 13304, the Discharger must provide the following technical and monitoring reports:

A. SITE INVESTIGATION WORK PLAN. The Discharger must submit a complete Site Investigation Work Plan (Work Plan) to the San Diego Water Board for review and approval that describes collection and analysis of soil vapor, sub-slab soil vapor (including crawl spaces where present), indoor and ambient air, groundwater, and soil samples. The Discharger must include plans for a sensitive receptor survey and a utility survey in the Work Plan. Results from this site investigation will help Board staff identify and delineate the source area and evaluate the risk of vapor intrusion into buildings. The Discharger, at a minimum, must design the Work Plan to answer the following questions:

1. What wastes are impacting the site? Which wastes are capable of generating toxic vapors?
2. Where is/are the source(s) of wastes impacting the site?
3. What are the vertical and lateral extents and concentrations of each waste in sub-slab soil vapor, soil vapor, soil, and groundwater beneath the site?
4. What are the geologic and hydrogeologic conditions at the site (e.g., heterogeneity/homogeneity of soils encountered, presence of surface water bodies nearby, groundwater flow direction and gradient)?
5. What are the concentrations of each volatile waste in indoor air within site buildings?
6. What is the temporal (i.e., seasonal) variability of waste concentrations in each medium?
7. Are there underground and/or aboveground utility conduits that play a role in transporting toxic vapors from wastes present in the subsurface to site buildings?
8. What sensitive receptors (i.e., residences, daycare centers, hospitals, or schools) are within 1,000 feet of the site?
9. Where are these sensitive receptors located?
10. Which sensitive receptors may be exposed to toxic vapors through vapor intrusion pathways?
11. Do wastes originating from soil, soil vapor, and groundwater contribute to an unacceptable risk to human health through inhalation of indoor air?

The Discharger must ensure the scope of activities in the Work Plan will provide data to:

1. Vertically and laterally delineate the source(s) of wastes and the extent of the subsurface discharge(s);
2. Understand geologic and hydrogeologic conditions and framework at the site;
3. Evaluate actual and potential toxic vapor migration pathways, including sewers and sewer laterals;
4. Evaluate the presence of actual and potential toxic vapor exposure pathways and sensitive receptors within 1,000 feet of the site; and
5. Assess the risk to human health through inhalation of toxic vapors.

The Discharger must ensure the Work Plan is received by the San Diego Water Board no later than 60 days after the State Water Board approves the Discharger's proposal for grant funding, and must contain, at a minimum, the following information:

1. **Summary of Previous Environmental Investigations and Historical Data.** The Work Plan must include a summary, including data tables and figures, of previously conducted environmental investigations.
2. **Conceptual Site Model.** The Work Plan must include a preliminary conceptual site model (CSM) that provides an understanding of the potential exposure of receptors to toxic vapors based on discharge sources, release mechanisms, transport media, and exposure pathways. The preliminary CSM must identify data gaps and provide a framework that justifies the proposed Sampling and Analysis Plan (SAP). Refer to the October 2011 *Vapor Intrusion Guidance*²¹, the July 2015 *Advisory – Active Soil Gas Investigations*, and the January 2007 *Vapor Intrusion Pathway: A Practical Guideline*²² for guidance on developing the CSM.
3. **Sampling and Analysis Plan.** The Work Plan must include a SAP that describes the proposed sampling methodologies, analytical methods, sampling frequency and locations, and quality assurance/quality control (QA/QC) procedures. The suite of chemical analyses, methods, and protocols must be adequate to quantitatively identify and characterize the full range of site-specific waste constituents for each affected medium (i.e., full suite of analytes for each analytical method used). All borings should be continuously logged to provide

²¹ Department of Toxic Substances Control. 2011. Final – Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October. Available at the following webpage: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/01/Final_VIG_Oct_2011.pdf.

²² Interstate Technology Regulatory Council. 2007. Vapor Intrusion Pathway: A Practical Guideline. January. Available at the following webpage: <https://www.itrcweb.org/Documents/VI-1.pdf>.

data to understand geologic and hydrogeologic conditions at the site. Sampling must not proceed without written concurrence from the San Diego Water Board. The Discharger must propose contingencies for the collection of additional samples in the SAP. The October 2011 *Vapor Intrusion Guidance* recommends multiple lines of evidence to assess vapor intrusion risk at a site. The Discharger must therefore obtain data for all potentially affected media (i.e., soil vapor, air, groundwater, and soil). The SAP must include collection of the following samples, at the minimum:

- a. Soil Vapor Samples. The Discharger must ensure soil vapor samples are collected immediately below impacted structures (if accessible) or immediately adjacent to them in upgradient, cross-gradient, and downgradient directions. Soil vapor samples must be collected at multiple depths, but no shallower than 3-5 feet below ground surface, to provide information on vertical distribution of wastes. Refer to the October 2011 *Vapor Intrusion Guidance* and the July 2015 *Advisory – Active Soil Gas Investigations*²³ for guidance on developing the soil vapor portion of the SAP. The October 2011 *Vapor Intrusion Guidance* recommends vertical soil vapor delineation if the data is used for preliminary vapor intrusion screening. The guidance also recommends the use of permanent sampling points to allow the Discharger to conduct repeated sampling for the evaluation of seasonal or temporal variations in soil vapor concentrations.
- b. Air and Sub-Slab Soil Vapor Samples. The Discharger must sample indoor air and sub-slab soil vapor in each commercial and residential unit suspected of being impacted by wastes from the site. This investigation requires a minimum of two sampling events to document seasonal variation: one during wintertime and one during summertime. A minimum of three pairs of indoor air and sub-slab sampling locations per building or approximately one sample per 400 square feet of floor space is recommended to provide adequate delineation of the contamination within structures. As explained in Finding 8, indoor air data collected to date are not adequate for evaluating the risk associated with vapor intrusion because data were not collected in accordance with current vapor intrusion guidance. The Discharger must refer to the October 2011 *Vapor Intrusion Guidance* and the OSWER 2015 Vapor Intrusion Technical Guide to collect indoor air samples during future events. The Discharger must collect upwind ambient air samples concurrently with the collection of indoor air and sub-slab vapor samples to provide information regarding outdoor influences on indoor air quality.

²³ Department of Toxic Substances Control, Los Angeles Regional Water Quality Control Board, and San Francisco Bay Regional Water Quality Control Board. 2015. *Advisory – Active Soil Gas Investigations*. July. Available at the following webpage: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/01/VI_ActiveSoilGasAdvisory_FINAL.pdf.

- c. **Groundwater Samples.** The Discharger must collect groundwater samples at a minimum of three locations where groundwater will also be gauged to determine the groundwater flow direction and gradient. The groundwater wells must be located to provide upgradient, downgradient, and cross-gradient concentration data. The groundwater sampling design must support delineation of the lateral and vertical extents of wastes present at the site. Preferably, groundwater samples should reflect concentrations at the top of the groundwater table where partitioning from groundwater to soil vapor occurs. Groundwater samples from a relatively narrow interval across the water table (i.e., short well screen) should be used and depth to water data recorded.
 - d. **Soil Samples.** The Discharger must collect soil samples to identify the source location and distribution of contaminants and to support delineation of the lateral and vertical extents of wastes present at the site.
 4. **Human Health Risk Assessment and Screening Methodology.** The Work Plan must include a description of the methodology used to conduct a human health risk assessment (HHRA). Refer to the October 2011 *Vapor Intrusion Guidance* and the OSWER 2015 Vapor Intrusion Technical Guide for guidance on how to conduct the HHRA. The HHRA methodology description must include the following, at a minimum:
 - a. The data to be collected in support of the HHRA;
 - b. The data screening process (i.e., how confounding factors are identified and addressed);
 - c. Screening numbers that are proposed to be used and rationale for proposing these values; and
 - d. A description of the risk model to be used for the HHRA.
 5. **Activity Completion Schedule.** The Work Plan must include a detailed schedule identifying the completion date of all activities and the submission date of all deliverables.
 6. **Supplementary Work.** The Discharger may submit Work Plan addenda and supplementary investigations and monitoring data to further characterize the site and evaluate remedial alternatives.
- B. SITE INVESTIGATION REPORT.** The Discharger must submit to the San Diego Water Board for review and approval a Site Investigation Report (Report) describing and interpreting the results from the implementation of the Work Plan. The Board must receive the Report no later than 60 days after completion of field activities and receipt of final laboratory analytical data. The Report must contain the following minimum information:

1. **Field Methodologies.** The Report must include the Discharger's detailed description of the field methodologies used for soil vapor, air, sub-slab soil vapor, groundwater, and soil sampling. This description must also include the field methodologies for the utility and conduits survey.
2. **Laboratory Analyses.** The Report must include all soil vapor, air, sub-slab soil vapor, groundwater, and soil analytical data collected to satisfy the requirements of this Order. The Discharger must report the analytical data (i.e., sample results and QA/QC results) in tabular format, organized by sample type (i.e., soil vapor, ambient/indoor air, sub-slab soil vapor, soil, and groundwater), and provide the sample location, date, and depth.
3. **Sample Locations and Number.** The Report must include a detailed description of each sample location and number of samples collected. The Report must include a map showing all sample locations.
4. **Utility and Sensitive Receptor Surveys.** The Report must include a detailed map of the utility and conduits survey findings, and a map showing all sensitive receptor locations and types. The Discharger must also provide a discussion of the survey results.
5. **Data Analysis.** The Report must include the Discharger's analysis of the soil vapor, air, sub-slab soil vapor, groundwater, and soil data collected. The Discharger must use these data to evaluate the potential impacts to human health from vapor intrusion and delineate the vertical and lateral extents of the contamination plumes at the site. The Discharger must also provide a discussion on the temporal variability of the measured waste concentrations in each medium.
6. **Conceptual Site Model.** The Report must include an updated CSM based on the newly collected data. The CSM must provide a refined understanding of the potential receptors' exposure to toxic vapors based on identified discharge sources at the site, release and transport mechanisms, affected media, and migration and exposure pathways. The updated CSM must identify any additional data gaps and include a detailed discussion on the level of uncertainty with any findings and conclusions.
7. **Human Health Risk Assessment.** The Report must include a screening-level HHRA using appropriate screening values (e.g., DTSC 2020 Note 3 and DTSC 2014 Note 5) and based on data collected in accordance with current vapor intrusion guidance documents (see Finding 8). The HHRA must include the following, at a minimum:
 - a. An estimation of current vapor intrusion risk using maximum measured indoor air concentrations;
 - b. An estimation of potential future vapor intrusion risk using maximum measured soil vapor or sub-slab soil vapor concentrations; and

c. An assessment of cumulative current and future cancer risk and hazard index.

8. **Conclusions and Recommendations.** The Report must include the Discharger's conclusions based on the sampling results, utility survey, sensitive receptor survey, and HHRA. The Report must also include the Discharger's recommendations for additional work or remedial measures. The Discharger's recommendations must include a proposed implementation schedule.

C. COMPLIANCE DATES. The compliance dates required by the Order are repeated below for easy reference.

Directive	Directive Requirement	Due Date
A	Site Investigation Work Plan	60 calendar days after the State Water Board approves the Discharger's proposal for grant funding
B	Site Investigation Report	Within 60 calendar days after completion of site investigation

D. PENALTY OF PERJURY STATEMENT. All reports must be signed by the Discharger's corporate officer or its duly authorized representative(s), and must include the following statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

E. DOCUMENT SUBMITTALS. The Discharger must submit all documents prepared in compliance with this Order to the San Diego Water Board via the Geotracker database:

<https://geotracker.waterboards.ca.gov/esj>

1. **Cover Letter and Document Title Page.** The Discharger must ensure all documents include a cover letter or document title page, unless otherwise authorized by the San Diego Water Board Executive Officer. The Discharger must address the cover letter or document title page to:

Executive Officer
California Regional Water Quality Control Board, San Diego Region
2375 Northside Drive, Suite 100
San Diego, California 92108-2700
Attn: Lara Quetin

2. **Geotracker Global ID.** The Discharger must ensure all documents submitted to the San Diego Water Board include the following Geotracker Global ID in the header or subject line:

T10000013945

3. **Document Size.** The Discharger must divide documents larger than 400 megabytes (MB) into separate files, at logical places in the report, to keep the file sizes under 400 MB.
4. **Specific Instructions for Submittals.** The Electronic Reporting Regulations require electronic submission of any report or data required by a regulatory agency from a cleanup site after July 1, 2005. The Discharger's electronic submission of any report or data must be uploaded on or prior to the regulatory due dates set forth in this Order or addenda thereto. Upon receipt of the electronic submission, the San Diego Water Board will use the email date and time to determine compliance with the regulatory due dates specified in this Order. To comply with the Electronic Reporting Regulations, the Discharger must upload all documents, including the following minimum information, to the Geotracker database:
 - a. Laboratory Analytical Data. The Discharger must ensure all analytical data, including geochemical data, for all environmental samples are uploaded in an Electronic Deliverable Format (EDF).
 - b. Boring Logs and Well Screen Intervals. The Discharger must ensure all boring logs are prepared by an appropriate registered professional and uploaded in in Portable Document Format (PDF). If monitoring wells are installed, the screen depths and intervals must be included on the boring log.
 - c. Depth to Water Data. Monitoring wells need to have the depth-to-water information reported whenever the data is collected, even if the well is not actually sampled during the sampling event.
 - d. Sample Location Data. The Discharger must ensure the latitude and longitude of all sampling locations are reported in EDF. Refer to the August 2019

Guidance on Uploading Vapor Intrusion Information into GeoTracker²⁴ for guidance on how to upload vapor intrusion information (e.g., building profiles, crawl space sample information).

- e. **Elevation Data.** Elevation measurements to the top of groundwater well casings are required for all groundwater monitoring wells.
 - f. **Site Map.** Site map should display former dry cleaner machine/PCE storage locations (if known), streets bordering the site, and sampling locations for all soil, water, and vapor samples. The site map must be a stand-alone document and can be submitted in various electronic formats. An updated site map may be uploaded at any time.
5. **Hard Copies and Other Electronic Media.** The San Diego Water Board may request the Discharger to provide hard copies and/or electronic copies (i.e., compact disc, universal serial bus (USB) drive, email, etc.) of any or all documents required by this Order. This may also include parts of documents, such as oversized drawings or maps.
6. **Electronic Mail.** The San Diego Water Board may request the Discharger to submit a complete copy (in a text-searchable PDF file) of all documents including signed transmittal letters, professional certifications, and all data presented in the documents to:

sandiego@waterboards.ca.gov

Upon receipt of the documents, the Board will use the date and time to determine compliance with the regulatory due dates specified in this Order.

F. VIOLATION REPORTS. The Discharger must notify the San Diego Water Board office by telephone or email, as soon as practicable, once the Discharger has knowledge of any violation of the requirements of this Order. The Board may, depending on the severity of the violation, require the Discharger to submit a separate technical report addressing the violation within five working days of the notification.

G. OTHER REPORTS. The Discharger must notify the San Diego Water Board in writing reasonably (at least 30 calendar days) in advance of the Discharger's activity that has the potential to cause further migration of pollutants.

²⁴ State Water Board. 2019. Guidance on Uploading Vapor Intrusion Information into GeoTracker, Electronic Submittal of Information Format, Version 1. August. Available at the following webpage:

https://www.waterboards.ca.gov/ust/electronic_submittal/docs/viesi_guide_v1.pdf

H. PROVISIONS.

1. **Waste Management.** The Discharger must properly manage, store, treat, and dispose of contaminated investigation-derived waste in accordance with applicable federal, state, and local laws and regulations. The storage, handling, treatment, or disposal of soil and groundwater associated with site assessments must not create conditions of nuisance as defined in Water Code section 13050 (m).
2. **Preliminary Information.** The Discharger may present data, preliminary interpretations, and preliminary conclusions to the San Diego Water Board as it becomes available, rather than holding this information until a final report is prepared. The Board encourages this type of ongoing reporting to facilitate and expedite Board approval of reports required by this Order.
3. **Duty to Use Registered Professionals.** The Discharger must provide documentation certifying that plans and reports required under this Order were prepared under the direction of appropriately qualified professionals. California Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of licensed professionals. A statement of qualifications and license numbers of the responsible lead professionals must be provided to the San Diego Water Board upon request. The lead professional must sign and affix their license stamp to all reports, plans, and documents.
4. **Laboratory Qualifications.** The Discharger must ensure all samples are analyzed by an Environmental Laboratory Accreditation Program-certified laboratory, using methods approved by the EPA for the type of analysis to be performed.²⁵
5. **Laboratory Analytical Reports.** The Discharger must ensure that any report presenting new analytical data includes the complete laboratory analytical report(s). The Discharger must ensure that all laboratory analytical report(s) are signed by the laboratory director and contain:
 - a. Complete sample analytical reports.
 - b. Complete laboratory QA/QC reports.
 - c. A discussion of the sample and QA/QC data.
 - d. A transmittal letter that indicates that the analytical work was supervised by the director of the laboratory and contains the following statement: "All

²⁵ Air and vapor analyses are not certified by the State Water Board's Environmental Laboratory Accreditation Program.

analyses were conducted at a laboratory certified for such analyses by the Environmental Laboratory Accreditation Program in accordance with current EPA procedures.”²⁶

6. **Reporting of Changed Owner or Operator.** The Discharger must notify the San Diego Water Board of any changes in site occupancy or ownership associated with the properties described in this Order or with any other properties impacted by the discharge (see Finding 3) within 30 days of the change.
7. **Duty to Operate and Maintain.** The Discharger must properly operate and maintain all facilities and systems of treatment, control, storage, disposal, and monitoring (and related appurtenances) installed or used by the Discharger to achieve compliance with this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities, installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
8. **Amendment.** This Order in no way limits the authority of the San Diego Water Board to require additional investigation or cleanup consistent with the Water Code. The Board may revise this Order as additional information becomes available.
9. **Time Extensions.** If the Discharger is unable to perform any activity or submit any documentation in compliance with requirements in this Order, the Discharger may request, in writing, an extension of time. The Discharger’s written extension request must include a justification for the delay and must be sent to the San Diego Water Board reasonably (at least 14 calendar days) in advance of the deadline sought to be extended. The Board may grant an extension for good cause, in which case staff will amend this Order.
10. **Field Work Notice.** The Discharger must give the San Diego Water Board advance notice of 14 days of all field work or field activities to be performed by the Discharger pursuant to this Order.
11. **Community Relations.** The Discharger must cooperate with the San Diego Water Board in providing information regarding site remediation to the public. If requested by the Board, the Discharger must participate in the preparation of such information for distribution to the public and in public meetings that may be held or sponsored by the Board to explain activities at the site or relating to this investigation.
12. **Corporate Signatory Requirements.** The Discharger must ensure all reports required under this Order are signed and certified by a responsible corporate

²⁶ Ibid.

officer of the Discharger described in paragraph (a) of this provision or by a duly authorized representative of that person as described in paragraph (b) of this provision.

- a. **Responsible Corporate Officer(s).** For the purposes of this provision, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - b. **Duly Authorized Representative.** A person is a duly authorized representative only if:
 - i. The authorization is made in writing by a person described in paragraph (b) of this provision.
 - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual (a duly authorized representative may either be a named individual or any individual occupying a named position).
 - iii. The written authorization is submitted to the San Diego Water Board.
 - c. **Changes to Authorization.** If an authorization under paragraph (b) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility or for any activity, a new authorization satisfying the requirements of paragraph (b) of this provision must be submitted to the San Diego Water Board prior to or together with any reports or information to be signed by an authorized representative.
13. **Duty to Submit Other Information.** The Discharger must immediately notify the San Diego Water Board in writing, when the Discharger becomes aware that they failed to submit any relevant facts in any submittal required under this Order or submitted incorrect information in any report. The Discharger must provide the Board with the relevant facts and/or correct information.

I. NOTIFICATIONS.

1. **Cost Recovery.** Upon receipt of invoices, and in accordance with instruction therein, the Discharger must reimburse the San Diego Water Board for all reasonable costs incurred by the Board to investigate discharge of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order and consistent with the estimation of work.
2. **All Applicable Permits.** This Order does not relieve the Discharger of the responsibility to obtain permits or other entitlements to perform necessary assessment activities. This includes, but is not limited to, actions that are subject to local, state, and/or federal discretionary review and permitting.
3. **Enforcement Discretion.** The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.
4. **Enforcement Notification.** Failure to comply with requirements of this Order may subject the Discharger to enforcement action, including but not limited to administrative enforcement orders requiring the Discharger to cease and desist from violations, imposition of administrative civil liability pursuant to Water Code section 13268 in an amount not to exceed \$1,000 for each day in which the violation occurs, referral to the State Attorney General for injunctive relief, and referral to the District Attorney for criminal prosecution. The San Diego Water Board reserves the right to seek administrative civil liability from the Discharger.
5. **Requesting Administrative Review by the State Water Board.** Any person affected by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and Cal. Code Regs. title 23, section 2050. The petition must be received by the State Water Board, Office of Chief Counsel, within 30 calendar days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.²⁷

²⁷ Nothing in this Order prevents the Discharger from later petitioning the State Water Resources Control Board to review other future San Diego Water Board orders regarding NBM Kachi LLC, including but not limited to subsequent investigative orders and/or cleanup or abatement orders, if any. Upon such petition, the Board will not assert that the Discharger have previously waived or forfeited their right to petition the Board's subsequent action or failure to act under Water Code section 13320. Further, upon such petition, the Board will not assert that the Discharger is precluded from petitioning for review of future orders by any failure to petition for review of this Order.

ORDERED BY

ROGER MITCHELL, PG
Supervising Engineering Geologist

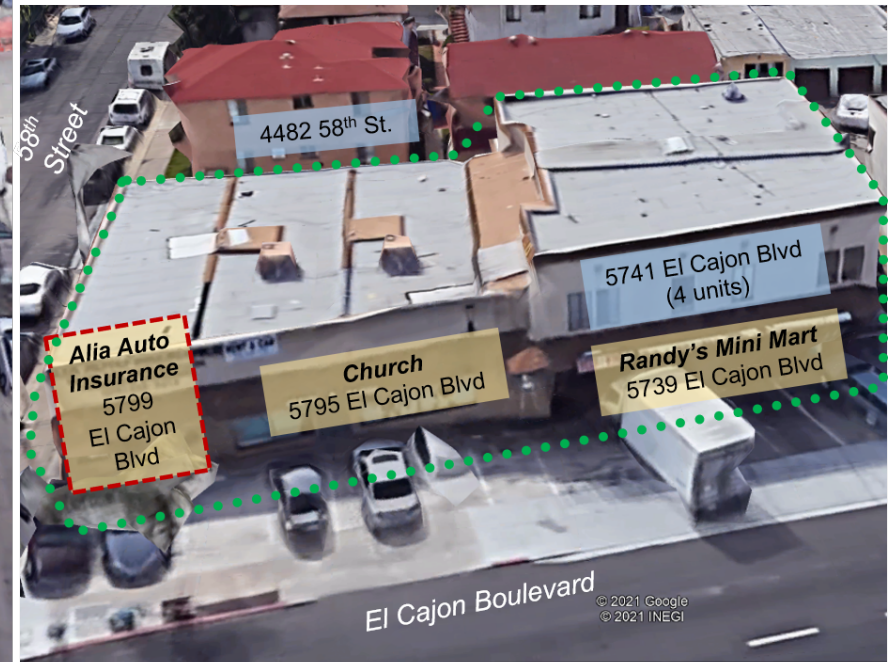
DATE



Site view from south

Legend:

- OUTLINE OF PROPERTIES IMPACTED BY WASTES
- RESIDENTIAL
- COMMERCIAL
- FORMER DRY CLEANER



Site view from north

Figure 1: Properties impacted by wastes.