

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

**CLEANUP AND ABATEMENT ORDER NO. R9-2018-0012**

**AN ORDER DIRECTING SERVPAC INC. AND HWV VENTURES LP TO CLEAN UP  
AND ABATE THE EFFECTS OF WASTE DISCHARGED FROM THE FORMER  
PACIFIC SERVICES DRY CLEANERS, 4085 PACIFIC HIGHWAY,  
SAN DIEGO, CALIFORNIA**

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

1. **LEGAL AND REGULATORY AUTHORITY.** This Order conforms to and implements policies and requirements of the Porter-Cologne Water Quality Control Act (division 7, commencing with Water Code section 13000) including (1) 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 title<sup>1</sup> 23, chapter 16, article 11; title 23, section 3890 et seq.; and (5) relevant standards, criteria, and advisories adopted by other State and federal agencies.
2. **DISCHARGE OF WASTES.** The former Pacific Services Dry Cleaners conducted dry cleaning operations from the 1940s through at least the 1990s at the property located at 4085 Pacific Highway in San Diego, California.<sup>2</sup> The dry cleaning business used tetrachloroethene (PCE), a common dry cleaning solvent, in operations. Drums labeled “perchloroethylene”<sup>3</sup> and discolored soil were observed on the property in 1988.<sup>4</sup> PCE and other dechlorination byproducts, including trichloroethene (TCE), were detected in soil, groundwater, soil vapor, and indoor air samples collected at, and downgradient of the property as early as 1991. PCE,

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<sup>1</sup> In this Order, the term title 23 refers to the California Code of Regulations from this point forward.

<sup>2</sup> The business operated as a pick-up/drop-off dry cleaning business under the name Pacific Coast Alterations from the 1990s until mid-2017. Dry cleaning operations were performed off site during this time period.

<sup>3</sup> Tetrachloroethene is also known as perchloroethylene or PCE.

<sup>4</sup> Applied Geosciences Inc. 1988. Toxic Hazard Assessment for a Site Located at 2105/2115 Kurtz Street, San Diego, California. February 23.

as well as degradation products of PCE, are byproducts of dry cleaning operations that have historically been disposed of as waste, as defined in Water Code section 13050, subdivision (d). Groundwater monitoring at the site has confirmed the presence of PCE and PCE dechlorination byproducts in groundwater at concentrations shown in the table below.

<b>Constituent</b>	<b>Maximum Historical Groundwater Concentration (µg/L)</b>	<b>Maximum Recent (2015) Groundwater Concentration (µg/L)</b>
PCE	241,000	240,000
TCE	10,600	7,200
Cis-1,2-DCE	43,300	19,000
Vinyl chloride	17	48

cis-1,2-DCE = cis-1,2-dichloroethene

PCE = tetrachloroethene

TCE = trichloroethene

µg/L = micrograms per liter

PCE and PCE dechlorination byproducts have been detected in sub-slab soil vapor, subsurface soil vapor, and indoor air samples collected from beneath and inside the 4085 Pacific Highway building and adjacent buildings, including the 2105 Kurtz Street office building (Old Town Trolley), at concentrations that indicate an unacceptable risk to human health due to vapor inhalation. The maximum concentrations of PCE and other wastes detected in soil vapor and indoor air samples are shown in the tables below.

<b>Constituent</b>	<b>Maximum and Screening Level Concentrations (µg/m<sup>3</sup>)</b>		
	<b>Historical (2011) Soil Vapor</b>	<b>Recent (2015) Soil Vapor</b>	<b>Screening Level<sup>1</sup></b>
PCE	33,000,000	61,000,000	2,100
TCE	900,000	1,700,000	3,000
Cis-1,2-DCE	890,000	2,200,000	35,000
Vinyl chloride	39,000	54,000	160

<sup>1</sup> Screening Levels (SLs) for soil vapor are estimated by dividing the corresponding commercial/industrial indoor air SL (see table below) by a DTSC-recommended attenuation factor (0.001).<sup>5</sup>

DTSC = Department of Toxic Substances Control

HERO = Human and Ecological Risk Office

µg/m<sup>3</sup> = micrograms per cubic meter

<sup>5</sup> DTSC. 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October.

Constituent	Maximum and Screening Level Concentrations (µg/m <sup>3</sup> )		
	Indoor Air (2016)	Indoor Air (2017)	Screening Level <sup>1</sup>
PCE	230	730	2.0
TCE	9.3	5.7	8.0 <sup>3</sup>
Cis-1,2-DCE	<0.40	--	35
Vinyl chloride	<2.6	--	0.16

<sup>1</sup> 2017 indoor air samples were collected after deployment of air purifiers and adjustments to the fresh air exchange rate within the 4085 Pacific Highway building.

<sup>2</sup> Indoor air commercial/industrial SLs from DTSC,<sup>6</sup> with the exception of the TCE SL (see note 3).

<sup>3</sup> Commercial/industrial accelerated response action level.<sup>7</sup>

3. **PERSONS RESPONSIBLE FOR THE DISCHARGE OF WASTES.** ServPac Inc. and HWV Ventures LP (together, Dischargers) are responsible for discharges of wastes to the subsurface from the former Pacific Services Dry Cleaners facility. The Dischargers owned and/or operated the facility when the various waste constituents were discharged to the subsurface where they cause or threaten to cause a condition of pollution or nuisance. The Dischargers, by failing to clean up waste or control the discharge, have caused or permitted waste to be discharged in such a manner that has created a condition of nuisance. The term discharge includes the active (intentional and/or unintentional) initial release as well as passive migration of waste.<sup>8</sup>
  - a. **ServPac Inc.** owned the property at 4085 Pacific Highway in San Diego since about 1956 through 2012 and operated Pacific Services Dry Cleaners from the 1940s through at least the mid-1990s, and possibly later. ServPac Inc. historically used a PCE dry cleaning machine to clean clothing and other items.
  - b. **HWV Ventures LP** purchased the property from ServPac Inc. in 2012 and is the current property owner.
  
4. **SITE LOCATION.** The site consists of the properties at 4085 Pacific Highway, 4055 Pacific Highway, 2105 Kurtz Street, and 2115 Kurtz Street, as well as any other properties that may be affected by the waste discharges. The site is located within the San Diego Mesa Hydrologic Area (908.20) of the Pueblo San Diego Hydrologic Unit (908.00). The Basin Plan does not designate any beneficial uses for groundwater in the San Diego Mesa Hydrologic Area.

<sup>6</sup> DTSC. 2017. DTSC HERO Health Risk Assessment (HHRA) Note Number 3: DTSC-Modified Screening Levels (DTSC-SLs). Interim Update. June.

<sup>7</sup> DTSC. 2014. DTSC HERO Human Health Risk Assessment (HHRA) Note Number 5: Health-based Indoor Air Screening Criteria for Trichloroethylene (TCE). August 23.

<sup>8</sup>State Water Board Order WQ 86-2 (*Zocon*) found that the discharge of waste includes the passive migration of waste, and that the owner of a site causes or permits a discharge even if the owner did not own the property at the time of the initial release.

5. **HUMAN HEALTH IMPAIRMENT.** PCE and its dechlorination byproducts, as well as other volatile organic compounds (VOCs), can pose a human health risk through the vapor intrusion pathway. These chemicals have long-term cancer risks as well as short-term non-cancer hazards. PCE is likely to cause cancer in humans and TCE is known to cause cancer in humans. 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.
6. **CONDITION OF NUISANCE.** Nuisance, as defined in Water Code section 13050, subdivision (m), is anything that meets all of the following requirements: (1) is injurious to health, 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. The concentrations of PCE and its byproducts threaten to create a condition of nuisance because they may pose a health risk to people that work or live in buildings overlying the soil vapor plume, and because the Dischargers improperly disposed of the PCE into soil, soil vapor, and groundwater.
7. **BASIS FOR CLEANUP AND ABATEMENT ORDER.** Water Code section 13304 contains the authority for the San Diego Water Board to require cleanup and/or abatement of pollution caused by discharges of wastes. Water Code section 13304 requires a person to clean up waste or abate the effects of the waste discharge if so ordered by a regional water board in the event there has been a discharge in violation of waste discharge requirements, or if a person has caused or permitted waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the State and creates or threatens to create a condition of pollution or nuisance. Cleanup and abatement is necessary to ensure that the existing conditions resulting from the unauthorized discharges are cleaned up, that the threat of unauthorized discharge to waters of the State from the site is prevented, and that any impacts to human health are abated. The issuance of a Cleanup and Abatement Order (CAO) pursuant to Water Code section 13304 is appropriate and consistent with the policies of the San Diego Water Board. Therefore, based on the findings in this CAO, the Board is authorized to order the Dischargers identified in Finding 3 to clean up and/or abate the effects of the waste discharged.
8. **CLEANUP LEVELS.** Section III.G of the 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) requires dischargers to clean up and abate the effects of discharges of waste in a manner that promotes attainment of either background water quality, or the best water quality that is reasonable if background levels of water quality

cannot be restored, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible. In consideration that the site is in a non-beneficial use area for groundwater and the CAO is being issued to address risk to human health through the vapor intrusion pathway, cleanup levels that prevent migration and are protective of human health are appropriate. In approving any alternative cleanup levels, the Cleanup and Abatement Policies and Procedures direct the San Diego Water Board to consider section 2550.4 of title 23, chapter 15. This regulation requires that cleanup levels be proposed for each affected medium, which in this case includes groundwater, soil, soil vapor, and indoor air.

9. **BASIS FOR REQUIRING TECHNICAL AND MONITORING PROGRAM 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 PROGRAM 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 waters of the State created by the discharge, (c) the vapor risk to human health as a result of the discharge, and (d) appropriate cleanup and abatement measures capable of meeting cleanup levels consistent with the 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 clean up and abate the nuisance and protect human health. Based on the nature and possible 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.

11. **CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE.** The issuance of this CAO is an enforcement action taken by a regulatory agency and is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), pursuant to California Code of Regulations title 14, section 15321, subdivision (a)(2). The issuance of this CAO may also be considered an action by a regulatory agency for the protection of the environment, exempt pursuant to title 14, section 15308.

If the San Diego Water Board later determines that work proposed in the Remedial Action Plan may have a significant effect on the environment, the Board will prepare and adopt an appropriate environmental document prior to approving the Remedial Action Plan in compliance with CEQA.

12. **COST RECOVERY.** Pursuant to Water Code section 13304, subdivision (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 may 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 Dischargers 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 of the effects thereof, or other remedial action, required by this CAO and consistent with the estimation of work.
13. **PUBLIC NOTICE.** The San Diego Water Board has notified all known interested persons and the public of its intent to adopt the CAO, and has provided them with an opportunity to submit written comments, evidence, testimony, and recommendations.

**IT IS HEREBY ORDERED** that, pursuant to Water Code sections 13267 and 13304, the Dischargers shall comply with the following directives:

- A. **CLEAN UP AND ABATE THE EFFECTS OF WASTE DISCHARGES.** The Dischargers shall take all corrective actions necessary to clean up and abate the contaminated soil, groundwater, soil vapor, and indoor air at the site to achieve cleanup levels that are protective of human health and the environment. The site consists of the properties at 4085 Pacific Highway, 4055 Pacific Highway, 2105 Kurtz Street, and 2115 Kurtz Street, as well as any other properties that may be affected by the waste discharges.
- B. **SITE ACCESS.**
1. The San Diego Water Board recognizes that the Dischargers do not own or control the properties located at 4055 Pacific Highway, 2105 Kurtz Street, or 2115 Kurtz Street in San Diego that comprise a portion of the site. Within **60 calendar days after CAO adoption**, the Dischargers shall take all reasonable actions to obtain access to perform the activities required by this CAO on the properties identified above. In the event the Dischargers are unable to gain access to any of these properties, the Dischargers shall notify the San Diego Water Board, in writing, as soon as practicable, but no later than 30 days after CAO adoption, and provide a detailed explanation of all actions to gain access.
  2. Within 30 calendar days of the Dischargers becoming aware of any other property affected by the waste discharges, the Dischargers shall take all reasonable actions to obtain access to perform the activities required by this CAO on the property. In the event the Dischargers are unable to gain access to the property, the Dischargers shall notify the San Diego Water Board, in writing, as soon as practicable, but no later than 30 days after becoming aware of the affected property, and provide a detailed explanation of all efforts to gain access.
- C. **FEASIBILITY STUDY.** The Dischargers shall prepare a Feasibility Study to evaluate cleanup alternatives capable of preventing contaminant migration and protecting human health. The Feasibility Study must be received by the San Diego Water Board for approval no later than **180 days after the State Water Resources Control Board approves the Dischargers' proposal for grant funding**. The Feasibility Study shall include, but is not limited to, the following:
1. An evaluation of the technical and economic feasibility of cleaning up soil, groundwater, and soil vapor to levels that are protective of human health.
  2. An evaluation of remedial alternatives capable of effectively cleaning up soil, groundwater, soil vapor, and indoor air to levels that do not cause an

unreasonable risk to human health from the inhalation of waste constituents in air.

3. An evaluation of the cost and effectiveness of each alternative for the remediation of the waste constituents to levels that do not cause an unreasonable risk to human health.
4. A recommended remedial alternative(s) for the cleanup and/or abatement of discharged wastes. The recommended alternative(s) must be protective of human health and the environment.

D. **INTERIM REMEDIAL ACTIONS.** Interim remedial measures shall be installed and maintained, as needed to minimize short-term risk to human health from TCE exposure, pending installation of a permanent remediation system. Interim remedial measures for consideration include, but are not limited to, increased heating, ventilation, and air conditioning [HVAC] system circulation, use of blowers/air purifiers, and sub-slab depressurization, as appropriate.

When the Dischargers become aware of a short-term risk to human health from TCE exposure, interim remedial actions shall be implemented as soon as practicable but shall not exceed the timeframes listed in the table below.<sup>9</sup>

Response Action Level	Indoor Air Concentration of TCE		Interim Action Timeframe
	Residential Scenario	Commercial/Industrial Scenario <sup>1</sup>	
Accelerated	2 µg/m <sup>3</sup>	8 µg/m <sup>3</sup>	2 weeks
Urgent	6 µg/m <sup>3</sup>	24 µg/m <sup>3</sup>	5 days

<sup>1</sup> Commercial/industrial scenario is for an 8-hour workday.

Implementation of interim measures does not negate the need for the development and implementation of a permanent remediation system to address long-term risk to human health from TCE and other site contaminants.

E. **NOTIFICATION PLAN.** The Dischargers shall prepare a Notification Plan for San Diego Water Board review and approval. The Notification Plan must be received by the Board no later than **180 calendar days after the State Water Resources Control Board approves the Dischargers’ proposal for grant funding.** The Notification Plan shall describe activities to be conducted to provide notification of exposure to contaminants in the indoor air of structures affected by the waste discharge described in this CAO to people that may occupy those structures. Notification shall be consistent with California Proposition 65,<sup>10</sup> which requires businesses to provide “clear and reasonable” warning before knowingly and

<sup>9</sup> DTSC. 2014. Human and Ecological Risk Office Human Health Risk Assessment (HHRA) Note No. 5: Health-based Indoor Air Screening Criteria for Trichloroethylene (TCE). August 23.

<sup>10</sup> <http://oehha.ca.gov/proposition-65/businesses-and-proposition-65>.



intentionally exposing anyone to a listed chemical unless the business can show that the anticipated exposure level will not pose a significant risk of cancer or is significantly below levels observed to cause birth defects or other reproductive harm. The Dischargers shall implement the notification procedures described in the Notification Plan within 14 calendar days of approval of the Plan by the Board.

**F. REMEDIAL ACTION PLAN AND IMPLEMENTATION.**

1. **Remedial Action Plan.** The Dischargers shall prepare a Remedial Action Plan (RAP) for San Diego Water Board review and approval. The RAP must be received by the Board no later than **90 calendar days after Board approval of the Feasibility Study**. The RAP shall describe the activities needed to clean up discharges of waste at the site to the cleanup levels approved by the San Diego Water Board. At a minimum, the RAP shall contain the following information:
  - a. **Introduction.** A brief description of the site and site history.
  - b. **Selected Remedy.** A detailed description of all of the remedial activities selected to attain the proposed cleanup levels for chlorinated solvents and other wastes.
  - c. **Health and Safety Plan.** A Health and Safety Plan that includes employee training requirements, a list of personal protective equipment for each task, medical surveillance requirements, standard operating procedures, and contingency plans.
  - d. **Community Relations Plan.** A Community Relations Plan for informing the public about (i) activities related to the final remedial design, (ii) the schedule for the remedial action, (iii) the activities to be expected during construction and remediation, (iv) provisions for responding to emergency releases and spills during remediation, and (v) any potential inconveniences such as excess traffic and noise that may affect the community during the remedial action.
  - e. **Quality Assurance Project Plan.** A Quality Assurance Project Plan (QAPP) that describes the project objectives and organization, functional activities, and quality assurance/quality control (QA/QC) protocols as they relate to the remedial action.
  - f. **Sampling and Analysis Plan.** A Sampling and Analysis Plan (SAP) that defines (i) sample and data collection methods to be used for the project, (ii) a description of the media and parameters to be monitored or sampled during the remedial action, and (iii) a description of the analytical methods to be used and an appropriate reference for each.

- g. **Evaluation of Environmental Impacts.** An evaluation of the potential environmental impacts of implementing the RAP based on the environmental factors in the CEQA checklist. The evaluation must identify levels of significance for environmental impacts, propose mitigation to lessen environmental impacts to less-than-significant levels, where feasible, and be adequate to allow the San Diego Water Board to prepare a CEQA Initial Study and an appropriate CEQA document for the RAP.
- h. **Mitigation Measures.** A description of the mitigation measures, if any, identified in the CEQA document for the RAP that must be implemented to minimize any significant environmental impacts of the cleanup to less-than-significant levels.
- i. **Wastes Generated.** A description of the plans for management, treatment, storage, and disposal of all wastes generated by the remedial action.
- j. **Pre-Remedial Studies Workplan.** A workplan for any Pre-Remedial Studies or for the collection of any data needed to optimize the remedial design.
- k. **Design Criteria Report.** A Design Criteria Report that defines in detail the technical parameters upon which the remedial design will be based. Specifically, the Design Criteria Report shall include preliminary design assumptions and parameters, including (i) waste characterization; (ii) volume and types of each medium requiring removal or containment; (iii) removal or containment methods; (iv) required qualities of waste streams (e.g., potential air emissions); (v) performance standards; and (vi) technical factors of importance to the design, construction, and implementation of the selected remedy including use of currently accepted environmental control measures, constructability of the design, and use of currently acceptable construction practices and techniques.
- l. **Equipment, Services, and Utilities.** A list of any elements or components of the selected remedial action that will require custom fabrication or long lead time for procurement. The list shall state the basis for such need and the recognized sources of such procurement.
- m. **Regulatory Permits and Approvals.** A list of required federal, State, and local permits and approvals needed to conduct the remedial action.
- n. **Remediation Monitoring Plan.** A Remediation Monitoring Plan consisting of (i) water quality monitoring, (ii) soil vapor monitoring, (iii) indoor air monitoring, and (iv) disposal monitoring. Indoor air monitoring to verify that remediation is successful shall be performed no later than 2

weeks following completion of remedial activities, and shall be repeated quarterly for the first year. Sampling frequency may be reduced after the first year if a risk assessment demonstrates that the human health risk has been mitigated.

- o. **Site Map.** A site map showing the location of buildings, roads, property boundaries, remedial equipment locations, staging areas, and other information pertinent to the remedial action.
  - p. **Contingencies.** A description of any additional items necessary to implement the RAP.
  - q. **Remediation Schedule.** A schedule detailing the sequence of events and activities, and the timeframe for each event and activity based on the shortest practicable time required to complete each activity. All proposed timeframes and completion dates are subject to review and approval by the San Diego Water Board.
2. **RAP Implementation.** The Dischargers shall begin implementation of the RAP within **60 calendar days after San Diego Water Board approval of the RAP**, unless otherwise directed in writing by the Board. The Dischargers shall carry out the activities in the RAP according to the schedule in the RAP. Before beginning RAP implementation activities, the Dischargers shall:
- a. Notify the Board of the intention to begin cleanup in accordance with Provision J.10.
  - b. Comply with any conditions set by the Board, including mitigation of adverse impacts from cleanup activities.

The Dischargers shall modify or suspend cleanup activities when directed to do so by the Board.

#### G. **CLEANUP AND ABATEMENT COMPLETION VERIFICATION.**

The Dischargers shall verify, through the submission of a **Cleanup and Abatement Completion Report**, that all RAP activities for the site have been completed as described in the approved RAP. The report must be received by the San Diego Water Board **within 90 calendar days after completion of the last remedial event or activity on the Remediation Schedule in the RAP.**

#### H. **POST-REMEDIAL MONITORING PROGRAM.**

Upon San Diego Water Board approval of the Cleanup and Abatement Completion Report, the Dischargers shall implement a Post-Remedial Monitoring

Program to demonstrate that the cleanup levels in the approved RAP have been achieved and maintained. The Monitoring Program shall include, but not be limited to, indoor air monitoring to demonstrate that the cleanup and abatement measures have resulted in concentrations of waste constituents in vapor that do not pose an unreasonable human health risk. The Monitoring Program shall consist of the following components:

1. **Post-Remedial Monitoring Plan.** The Dischargers shall prepare and submit a Post-Remedial Monitoring Plan to the San Diego Water Board for review and approval. The Plan must be received by the Board **180 calendar days after the State Water Resources Control Board approves the Dischargers' proposal for grant funding.** The Post-Remedial Monitoring Plan shall be designed to demonstrate that the cleanup and abatement measures have resulted in concentrations of waste constituents in vapor that do not pose an unreasonable human health risk. At a minimum the Post-Remedial Monitoring Plan shall include the following elements:
  - a. **Quality Assurance Project Plan.** A QAPP describing the project objectives and organization, functional activities, and QA/QC protocols for post-remediation monitoring.
  - b. **Sampling and Analysis Plan.** A SAP defining (1) sample and data collection methods to be used for the post-remedial monitoring, (ii) a description of the media and parameters to be monitored or sampled, and (iii) a description of the analytical methods to be used and an appropriate reference for each.
  - c. **Indoor Air Data.** Site-wide post-remedial indoor air concentrations in all site buildings.
  - d. **Activities Completion Schedule.** A schedule detailing the sequence of and timeframe for each activity based on the time reasonably required to complete each activity.
2. **Post-Remedial Monitoring Plan Implementation.** The Dischargers shall implement the Post-Remedial Monitoring Plan (Directive H.1) in accordance with the Activities Completion Schedule contained in the Post-Remedial Monitoring Plan unless otherwise directed in writing by the San Diego Water Board. Before beginning sample collection activities, the Dischargers shall:
  - a. Notify the Board in advance at the beginning of sample collection activities in accordance with Provision K.10.

- b. Comply with any conditions set by the Board with respect to sample collection methods such as providing split samples.
3. **Semiannual Progress Reports.** The Dischargers shall prepare and provide written semiannual progress reports that:
- a. Describe the sample and data collection methods used for post-remedial monitoring.
  - b. Describe the QA/QC protocols that were followed during sample and data collection activities.
  - c. Describe the analytical methods used for analysis of samples.
  - d. Describe operation effectiveness and maintenance of the mitigation system(s) that were installed at the site as part of Directive F.2.
  - e. Include all results of sampling and tests, and all other verified or validated data received or generated by or on behalf of the Dischargers during the previous monitoring period.
  - f. Evaluate and interpret monitoring data.
  - g. Analyze whether or not cleanup levels have been attained, or maintained in soil, groundwater, soil vapor, and indoor air.
  - h. Show the locations, type, and number of samples on a site map.
  - i. Describe all activities, including data collection and other field activities that are scheduled for the next monitoring period, and provide other information relating to the progress of work, including, but not limited to, a graphical depiction of the progress of the remedial actions (e.g., concentration vs. time plots).
  - j. Identify any modifications to the RAP or other work plan(s) that the Dischargers submitted to the San Diego Water Board or that have been approved by the Board during the previous monitoring period.
  - k. Include information regarding all delays encountered or anticipated that may affect the future schedule for completion of the events and activities in the post-remedial monitoring program, and a description of all efforts made to mitigate those delays or anticipated delays.

The Dischargers shall prepare and submit the semiannual progress reports to the San Diego Water Board for review and approvals. The reports must be received by the Board by **the 15<sup>th</sup> day of March and the 15<sup>th</sup> day of September of each**

**year** following the completion of the last remedial event or activity on the Remediation Schedule in the RAP. Submission of progress reports shall continue until the San Diego Water Board determines that no further action is required by the Dischargers.

- I. **VIOLATION REPORTS.** If the Dischargers violate any requirement of the CAO, then the Dischargers must notify the San Diego Water Board office by telephone and by email using the email address provided in Directive K.14.c, as soon as practicable once the Dischargers have knowledge of the violation. The Board may, depending on the severity of the violation, require the Dischargers to submit a separate technical report addressing the violation within five working days of notification. In addition, a violation may subject the Dischargers to a future enforcement action.
  
- J. **COMPLIANCE DATES.** For easy reference, the compliance dates for the submittals required by the CAO are repeated below.

Directive	Directive Requirement	Due Date
B	Site Access	Within 60 calendar days of CAO adoption
C	Feasibility Study	180 days after the State Water Resources Control Board approves the Dischargers' proposal for grant funding
E	Notification Plan	180 days after the State Water Resources Control Board approves the Dischargers' proposal for grant funding
F.1	Remedial Action Plan	Within 90 calendar days of Board approval of Feasibility Study
F.2	Remedial Action Plan Implementation	Within 60 calendar days of Board approval of Remedial Action Plan
G	Cleanup and Abatement Completion Report	Within 90 calendar days of completion of remediation
H.1	Post-Remedial Monitoring Work Plan	180 days after the State Water Resources Control Board approves the Dischargers' proposal for grant funding
H.3	Semiannual Progress Reports	March 15 and September 15 of each year following completion of remediation

K. **PROVISIONS.**

- 1. **Waste Management.** The Dischargers shall properly manage, store, treat, and dispose of contaminated investigation-derived waste in accordance with

all 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, subdivision (m).

2. **Preliminary Information.** The Dischargers 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. This type of ongoing reporting is encouraged to facilitate and expedite Board approval of reports required by the CAO.
3. **Duty to Use Registered Professionals.** The Dischargers shall provide documentation that plans and reports required under the CAO are 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 shall be provided to the San Diego Water Board upon request. The lead professional shall sign and affix their license stamp to all reports, plans, and documents.
4. **Laboratory Qualifications.** All samples must be analyzed by Environmental Laboratory Accreditation Program-certified laboratories using methods approved by the U.S. Environmental Protection Agency (USEPA) for the type of analysis to be performed.
5. **Laboratory Analytical Reports.** Any report presenting new analytical data is required to include the complete laboratory analytical report(s). The laboratory analytical report(s) must be 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 whether or not all the analytical work was supervised by the director of the laboratory, and contains the following statement: "All analyses were conducted at a laboratory certified for such analyses by the Environmental Laboratory Accreditation Program in accordance with current USEPA procedures."
6. **Reporting of Changed Owner or Operator.** The Dischargers must notify the San Diego Water Board of any changes in site occupancy or ownership

associated with the property described in this Order within 30 days of the change.

7. **Duty to Operate and Maintain.** The Dischargers shall, at all times, properly operate and maintain all facilities and systems of treatment, control, storage, disposal, and monitoring (and related appurtenances) that are installed or used by the Dischargers to achieve compliance with the CAO. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities, which would be installed by the Dischargers only when the operation is necessary to achieve compliance the conditions of the CAO.
8. **Amendment.** The CAO in no way limits the authority of the San Diego Water Board to require additional investigation and cleanup consistent with the Water Code. The Board may revise the CAO as additional information becomes available.
9. **Time Extensions.** If, for any reason, the Dischargers are unable to perform any activity or submit any documentation in compliance with requirements in the CAO, the Dischargers may request, in writing, an extension of time. The written extension request shall include justification for the delay and must be received by the San Diego Water Board within 14 calendar days in advance of the deadline sought to be extended. An extension may be granted for good cause, in which case the CAO will be accordingly amended.
10. **Field Work Notice.** The Dischargers shall give the San Diego Water Board advance notice of at least 14 calendar days of all field work or field activities to be performed by the Dischargers pursuant to the CAO. If 14 days advance notice is impossible for the Dischargers to provide, the Dischargers shall provide notice to the Board of all such field work or activities as far in advance of such work as is possible. In any event, any notification pursuant to this Provision shall be given at least 24 hours prior to the given field activities, unless the Board agrees otherwise.
11. **Community Relations.** The Dischargers shall cooperate with the San Diego Water Board in providing information regarding site remediation to the public. If requested by the Board, the Dischargers shall 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 cleanup.
12. **Corporate Signatory Requirements.** All reports required under the CAO shall be signed and certified by a responsible corporate officer of the Dischargers 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 (a) 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 thus be either 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 shall be submitted to the San Diego

Water Board prior to or together with any reports or information to be signed by an authorized representative.

- d. **Penalty of Perjury Statement.** All reports shall be signed by the Dischargers' corporate officers or their duly authorized representative(s), and shall include the following statement by the official(s), 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 fines and imprisonment for knowing violations."

13. **Duty to Submit Other Information.** When the Dischargers become aware that they failed to submit any relevant facts in any submittal required under the CAO, or submitted incorrect information in any such report, the Dischargers shall promptly submit in writing such facts or information to the San Diego Water Board.
14. **Document Submittals.** All documents prepared in compliance with the CAO shall be submitted to the San Diego Water Board via the Geotracker database. The Board may also request hard copies and/or electronic copies on a CD or other appropriate media, including electronic mail (email).
- a. **Geotracker Database.** Per the Electronic Reporting Regulations (chapter 30, division 3 of title 23 and division 3 of title 27, California Code of Regulations), the Dischargers shall submit all documents electronically to the Geotracker database located at:

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

The electronic data shall be uploaded on or prior to the regulatory due dates set forth in the Order or addenda thereto. Upon receipt of the documents, the San Diego Water Board shall use the email date and time to determine compliance with the regulatory due dates specified in this Order. Note the following regarding email document submittals:

- i. Addressee. All documents shall include the following addressee information on the cover letter and/or document title page unless otherwise directed by the Executive Officer:

Executive Officer  
California Regional Water Quality Control Board, San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, California 92108-2700  
Attn: Ms. Sarah Mearon

- ii. Geotracker Global ID. All documents submitted to the San Diego Water Board shall include the following Geotracker Global ID in the header or subject line: **T0608167536**.
- iii. Document Size. Documents larger than 400 megabytes (MB) shall be divided into separate files at logical places in the report to keep the file sizes under 400 MB.

To comply with these requirements, the Dischargers shall upload all documents, including the following minimum information, to the Geotracker database:

- i. Laboratory Analytical Data. Analytical data (including geochemical data) for all soil, groundwater, soil vapor, and indoor air samples in Electronic Deliverable Format (EDF).
  - ii. Locational Data. The latitude and longitude of all permanent sampling locations for which data are reported in EDF.
  - iii. Site Map. The site map shall be a stand-alone document and can be submitted in various electronic formats. An updated site map may be uploaded at any time.
- b. **Hard Copies and CDs**. If requested by the San Diego Water Board, the Dischargers shall also provide any or all of the following to the Board: a hard copy of the complete document, a hard copy of the cover/transmittal letter, a hard copy of oversized drawings or maps, and an electronic copy (on a CD or other appropriate media) of the complete document.
  - c. **Electronic Mail**. If requested by the San Diego Water Board, the Dischargers shall also 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](mailto:sandiego@waterboards.ca.gov)

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

#### L. NOTIFICATIONS.

1. **All Applicable Permits.** This Order does not relieve the Dischargers 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.
2. **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.
3. **Enforcement Notification.** Failure to comply with requirements of this Order may subject the Dischargers to enforcement action, including but not limited to administrative enforcement orders requiring the Dischargers to cease and desist from violations, imposition of administrative civil liability pursuant to Water Code section 13268, for failure to submit required technical or monitoring reports pursuant to Water Code section 13267 in an amount not to exceed \$1,000 for each day in which the violation occurs, or imposition of administrative civil liability pursuant to Water Code section 13350 in an amount not to exceed \$5,000 for each day of violation of CAO directives, referral to the State Attorney General for injunctive relief, and referral to the District Attorney for criminal prosecution. The Dischargers are joint and severally liable for the entire amount of the administrative civil liability. The San Diego Water Board reserves the right to seek administrative civil liability from the Dischargers.
4. **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 section 13320 of the Water Code and 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.<sup>11</sup>

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<sup>11</sup> Nothing in this Order prevents the Dischargers from later petitioning the State Water Board to review other future San Diego Water Board orders, including but not limited to subsequent investigative orders and/or cleanup or abatement orders, if any.

This CAO is effective upon the date of signature.

ORDERED BY



DAVID W. GIBSON  
Executive Officer

11 January 2018

DATE