UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IX

IN THE MATTER OF:	ADMINISTRATIVE ORDER FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
PACIFIC COAST PIPELINE CITY OF FILLMORE VENTURA COUNTY, CALIFORNIA	U.S. EPA Region IX CERCLA Docket No. 2009-14
CHEVRON CORPORATION Respondent	Proceeding under Sections 104, 106, 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9606, 9607 and 9622.

I. INTRODUCTION AND JURISDICTION

1. This Administrative Order ("Order") directs the Chevron Corporation ("Respondent") to prepare and perform at the Pacific Coast Pipeline Superfund Site located just east of the City of Fillmore, California ("the Site") a focused Remedial Investigation ("RI") and Feasibility Study ("FS"; collectively "RI/FS") as described in the attached Statement of Work ("SOW") (Attachment 1). Pursuant to this Order, Respondent will conduct the RI/FS described herein to address an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual or threatened release of hazardous substances, at or from the Site. This RI/FS will build upon earlier phases of investigation at the Site, as described below.

2. This Order to Respondent is issued by the United States Environmental Protection Agency ("EPA"), Region 9, pursuant to the authority vested in the President of the United States by section

106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9606(a) as amended ("CERCLA"), and delegated to the EPA Administrator by Executive Order No. 12580, January 23, 1987, 52 Fed. Reg. 2923, as amended by Executive Order No. 13016, August 30, 1996, 61 Fed. Reg. 45871, further delegated to the EPA Regional Administrators by EPA Delegation No. 14-14-B and further redelegated to the Region 9 Superfund Branch Chiefs by Regional Delegation R9 1290.14A, dated November 16, 2001.

3. In issuing this Order, EPA's objectives are: (a) to determine the nature and extent of contamination and any threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants or contaminants at or from the Site by conducting an RI; and (b) to identify and evaluate alternatives for remedial action to prevent, mitigate or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants or contaminants at or from the Site by conducting an FS.

4. The activities conducted under this Order are subject to approval by EPA. Respondent shall provide all information appropriate and necessary for the RI/FS, and for a record of decision ("ROD"), consistent with CERCLA and the National Contingency Plan ("NCP"), 40 C.F.R. Part 300. The activities under this Order shall be conducted in compliance with the attached SOW, and with all applicable EPA guidances, policies, and procedures.

II. FINDINGS OF FACT

5. The Pacific Coast Pipeline Superfund Site is an approximately twenty acre parcel located just east of the City of Fillmore in Ventura County, California. The Site property is bounded by agricultural land to the east, open space to the north, a Ventura County Transportation Commission rail line, State Highway 126, and commercial and residential properties to the south, and Pole Creek to the west. Residential properties and San Cayetano Elementary School are west of Pole Creek. Pole Creek, which is contained in a concrete flood-control channel, drains into the Santa Clara River

approximately one half mile south of the Site.

6. From the early 1900s to 1951, Texaco, Respondent's predecessor in interest, owned and operated a petroleum refinery at the Site. The primary refinery products were gasoline, diesel, and fuel oil. In 1951 the refinery was shut down and dismantled. From 1952 to 2002, the year after Texaco merged with Chevron to form the company ChevronTexaco, the Site was used as a crude oil pumping station. Site structures included buried pipelines, pumping equipment, above-ground storage tanks, and miscellaneous buildings. The last remaining crude oil tank was dismantled and removed in August 2004, the year before Respondent changed its name from ChevronTexaco to Chevron.

7. Wastes from the refinery process are believed to have consisted primarily of tank bottoms, filter clays, and sludges. These refinery wastes were disposed of on-site in a large main waste pit located on the western border of the Site and in eight smaller unlined sumps and pits located throughout the Site. Crude oil was stored in eight above-ground storage tanks.

8. Under the direction of California Department of Health Services (DHS) and the Regional Water Quality Control Board, from 1983 to 1989 Respondent conducted a groundwater and soil assessment at the Site. Three groundwater monitor wells were installed and up to 5,800 μg/L benzene was detected in groundwater.

9. In 1986, under the direction of the DHS, Respondent removed 38,000 cubic yards of waste material and contaminated soils from the main waste pit and other disposal areas. This soil removal completed the soil excavation activities that were required at that time. Respondent also installed 34 additional monitor wells as part of the Site investigation.

10. EPA proposed that the Site be listed on the National Priorities List on June 24, 1988. On October 4, 1989 (54 Fed. Reg. 1015), pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605,

EPA listed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B.

11. EPA issued an Administrative Order on Consent ("AOC") for Remedial Investigation and Feasibility Study at the Site in November 1989. Pursuant to this AOC, Respondent performed some early remedial design activities. These included: 1) preparation of a Preliminary Remedial Design Work Plan; 2) design, implementation, monitoring, and reporting on a pilot study to determine the effectiveness of SVE; 3) design of the SVE system; and 4) design of the groundwater extraction and treatment system.

12. On March 31, 1992, EPA signed the ROD for the Site. The remedial action objectives were to control further migration of the contaminated groundwater, prevent further migration of contamination in soil to groundwater, and recover and treat contaminated groundwater until the aquifer is restored and groundwater contamination is below cleanup levels. The cleanup levels established in the ROD are the federal and state drinking water standards. EPA selected a remedy that includes the following: a) construction and operation of a groundwater extraction and treatment system; b) discharge of treated groundwater to the aquifer or reuse in a beneficial manner; c) soil vapor extraction (SVE) for those soil areas that threaten to contaminate groundwater; d) groundwater monitoring to demonstrate that the extraction system is effectively capturing the contaminant plume; and e) maintenance of perimeter fencing at the Site until cleanup standards are met. At the time the ROD was signed, EPA anticipated that the groundwater would be restored to the cleanup standards in 30 years.

13. EPA issued a remedial design/remedial action Consent Decree in August 1993. The Consent Decree required Respondent to install a groundwater extraction and treatment system and an SVE system as specified in the ROD. The remedial work was conducted in two phases, a pilot study and the implementation of the pilot study results. The objective of Phase 1 was to provide data necessary for the design of the Phase 2 system while achieving some remediation in the interim.

14. The Phase 1 groundwater treatment system ("GWTS") began operating in December 1993. The extracted groundwater was treated with granular activated carbon and discharged to Pole Creek under a National Pollutant Discharge Elimination System permit. In November 1995 the Phase 2 GWTS began operating. The Phase 2 groundwater system was similar to the Phase 1 system, but it had an increased capacity and several operational modifications to improve performance.

15. In 1994 the Phase 1 SVE system operations began. Several types of soil vapor treatment systems were operated at the Site to determine the optimum equipment for Phase 2 operations. Equipment tested at the Site included a regenerative thermal oxidation unit, internal combustion engines (VR Systems), and thermal oxidation units (King Buck/Hasstech and Baker Furnace). In May 1995 the Phase 2 SVE commenced. SVE wells were used in the three target areas evaluated in Phase 1 and the Baker Furnace thermal oxidation unit was selected for the soil vapor treatment.

16. The Site achieved construction completion status when the Preliminary Close Out Report was signed on September 27, 1996. The SVE system reached the shut-off criteria, i.e., benzene less than 100 mg/m3 (31 ppmv), in January 2002. Soil gas concentrations were monitored monthly for eight months following SVE system shut-off. No rebound above 100 mg/m3 was observed and soil vapor monitoring was discontinued in November 2002. The GWTS operated as designed through October 2002, at which time EPA determined that the ROD cleanup goals could not be achieved by the GWTS. Continued monitoring indicated that the footprint of the groundwater plume remained stable and that concentrations of benzene, the primary contaminant, did not increase. Current benzene concentrations in groundwater range up to 390μg/L, a reduction of greater than 90% compared to dissolved benzene concentrations prior to operation of the GWTS and SVE system.

17. Despite the progress made in cleaning up the Site pursuant to the 1992 ROD, contamination remained in the shallow soil and the groundwater contamination exceeded the applicable drinking water standards. Since 2002, Respondent on a voluntary basis has performed

a variety of investigations related to the remaining soil and groundwater contamination. In 2003 and 2004 an Oxygen Release Compound (ORC) injection pilot test was performed at the Site in an effort to clean up benzene remaining in groundwater. ORC injection performed below expectations. Evaluation of the data from the pilot test indicated that the oxygen demand for the saturated zone at this depth was considerably higher than anticipated. Therefore, ORC enhancement was no longer considered as a potential remedial alternative at the Site.

18. As the 1992 ROD did not address the issue, under EPA's direction Respondent in 2005 began a multi-phase shallow soil investigation in the former refinery area to characterize the site surface soils in order to assess the potential risk to human health and the environment through exposure to contaminated surface soil and to determine if additional cleanup is required. Phase 1 focused on the soil under the former storage tanks; Phase 2 included an in-depth review of site historical operations and shallow soil sampling across the site; and Phase 3 addressed data gaps from the previous investigation phases. Respondent submitted the Phase 3 Shallow Soil Investigation Report/Human Health Risk Assessment to EPA in May 2009.

19. Respondent in 2005 also conducted a field investigation, under EPA's direction, to determine if there is a potential for soil vapor intrusion into residences near the groundwater contamination. Respondent completed the investigation in 2007 and determined that while vapor (primarily xylene and toluene) from groundwater is migrating up into the deeper soils (40 – 60 ft bgs) directly above the plumes, it is attenuating in the soil and does not pose a risk to nearby residents. The investigation also confirmed that the benzene in groundwater is naturally attenuating.

20. As described above, Respondent already has performed extensive post-ROD field investigations and Site work relevant to an RI. EPA is issuing this Order for implementation of the RI/FS, which will lead to a final ROD for the entire Site. A separate subsequent settlement agreement will provide for implementation of the remedy that will be selected based on the information developed during the RI/FS.

III. CONCLUSIONS OF LAW AND DETERMINATIONS

21. The Pacific Coast Pipeline Superfund Site is a "facility" as defined in section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

22. Respondent is a "person" as defined in section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

23. Respondent or its predecessor owned and operated the Site during a period of time when hazardous substances were disposed there, and is therefore a "liable" party as defined in section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is subject to this Order under section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

24. The substances listed in Paragraphs 16 and 19 of this Order are found at the Site and are "hazardous substances" as defined in section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

25. The conditions at the Site described above in Section II constitute an actual or threatened "release" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22). The potential for future migration of hazardous substances from the Site poses a threat of a continued "release."

26. The actual or threatened release of one or more hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

27. The actions required by this Order are necessary to protect the public health, welfare, and the environment, and is consistent with the NCP and CERCLA.

28. The contamination and endangerment at this Site constitute an indivisible injury.

IV. NOTICE TO THE STATE

29. On September 14, 2009, prior to issuing this Order, EPA notified the State of California, Department of Toxic Substances Control ("DTSC"), that EPA would be issuing this Order.

V. ORDER

30. Based on the foregoing, Respondent is hereby ordered to comply with the following provisions, including but not limited to all attachments to this Order, all documents incorporated by reference into this Order, and all schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order.

VI. DEFINITIONS

31. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

b. "Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the end of the next working day.

c. "EPA" shall mean the United States Environmental Protection Agency.

d. "Effective Date" shall mean the Effective Date of this Order as provided in Section XXV.

e. "Institutional Controls" shall mean non-engineered mechanisms, such as administrative or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements, and well drilling prohibitions.

f. "National Contingency Plan" or "NCP" shall mean the National Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any amendments thereto.

g. "Paragraph" shall mean a portion of this Order identified by an arabic numeral.

h. "Response Costs" shall mean all costs incurred by the United States in overseeing Respondent's implementation of the requirements of this Order or in performing any response action which Respondent fails to perform in compliance with this Order. Response costs are all costs including, but not limited to, direct and indirect costs and interest, that EPA incurs in overseeing Respondent's implementation of the requirements of this Order, including reviewing or developing plans, reports and other items pursuant to this Order, verifying the Work, or otherwise implementing, overseeing, or enforcing this Order or in performing any response action which Respondent fails to perform in compliance with this Order.

I. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the RI/FS as set forth in Attachment 1 to this Order. The SOW is incorporated

into this Order and is an enforceable part of this Order.

j. "Section" shall mean a portion of this Order identified by a roman numeral and includes one or more Paragraphs.

k. "Site" shall mean the Pacific Coast Pipeline Superfund site, as described in the NPL listing.

l. "State" shall mean the State of California, Department of Toxic Substances Control.

m. "United States" shall mean the United States of America.

n. "Work" shall mean all activities Respondent is required to perform under this Order, including any activities described in the SOW, but not those activities required in Section XIV, Record Preservation.

VII. NOTICE OF INTENT TO COMPLY

32. Not later than October 16, 2009, Respondent shall provide written notice to EPA's Remedial Project Manager ("RPM") stating whether it will comply with the terms of this Order. If Respondent does not unequivocally commit to perform the Work as provided by this Order, it shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date of this Order, any "sufficient cause" defenses asserted by Respondent under sections 106(b) and 107(c)(3) of CERCLA. The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of Respondent's assertions.

VIII. PARTIES BOUND

33. This Order shall apply to and shall be binding on Respondent and on its directors, officers, employees, agents, successors, and assigns. No change in the ownership, corporate status, or other control of any of the entities referenced in this Paragraph shall alter any of Respondent's responsibilities under this Order.

34. Respondent shall provide a copy of this Order to any prospective owners or successors before a controlling interest in Respondent's assets, property rights, or stock are transferred to the prospective owner or successor. Respondent shall provide a copy of this Order to each contractor, sub-contractor, laboratory, or consultant retained to perform any Work under this Order, within five (5) days after the Effective Date of this Order or on the date such services are retained, whichever date occurs later. Respondent shall also provide a copy of this Order to each person representing Respondent with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be related by contract to Respondent within the meaning of section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondent is responsible for compliance with this Order and for ensuring that its contractors, subcontractors and agents comply with this Order, and perform any Work in accordance with this Order.

IX. WORK TO BE PERFORMED

35. Respondent shall cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Respondent shall participate in the preparation of such information for distribution to the public and in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.

36. All aspects of the Work to be performed by Respondent pursuant to this Order shall be under the direction and supervision of a qualified project manager, the selection of which shall be subject to approval by EPA. EPA hereby approves Ms. Leslie Klinchuch, the current project manager, to be project manager for purposes of this Order. If at any time during the effective period of this Order Respondent wants a different person to serve as project manager, Respondent shall notify EPA in writing of the name and qualifications of the proposed project manager, including primary support entities and staff, and shall obtain approval from EPA before the proposed project manager performs any Work under this Order.

37. EPA will review Respondent's proposal of a project manager according to the terms of this Paragraph. If EPA disapproves of the selection of the project manager, Respondent shall submit to EPA within 30 days after receipt of EPA's disapproval of the project manager previously selected, a list of project managers, including primary support entities and staff, that would be acceptable to Respondent. EPA will thereafter provide written notice to Respondent of the names of the project managers that are acceptable to EPA. Respondent may then select any of the project managers which EPA has notified Respondent in the written notice are acceptable and shall notify EPA of the name of the project manager selected within 21 days of EPA's notification to Respondent of project managers acceptable to it.

38. Respondent shall perform the Work in accordance with this Order, the SOW, CERCLA, the NCP, and EPA guidance including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA"(OSWER Directive # 9355.3-01), "Guidance for Data Usability in Risk Assessment" (OSWER Directive #9285.7-05) and guidances referenced therein, and guidances referenced in the SOW, as may be amended or modified by EPA. The general activities that Respondent is required to perform are identified below in the Summary of Deliverables, attached hereto as Table 1 to the SOW. The tasks that Respondent must perform are described more fully in the SOW and guidances. The activities and deliverables identified below shall be developed as provided in the SOW, and shall be submitted to EPA as

provided. All work performed under this Order shall be in accordance with the schedules herein, and in full accordance with the standards, specifications, and other requirements of the SOW, as initially approved or modified by EPA, and as may be amended or modified by EPA from time to time.

39. In the event that Respondent amends or revises a report, plan or other submittal upon receipt of EPA comments, if EPA subsequently disapproves of the revised submittal, or if subsequent submittals do not fully reflect EPA's directions for changes, EPA retains the right to seek statutory penalties; perform its own studies, complete the Work (or any portion of the Work) under CERCLA and the NCP, and seek reimbursement from Respondent for its costs; and/or seek any other appropriate relief.

40. Respondent shall perform the Work according to the schedule provided in the SOW.

41. In the event that EPA takes over some of the tasks, but not the preparation of the RI/FS report, Respondent shall incorporate and integrate information supplied by EPA into the final RI/FS report.

42. All plans, reports, and other deliverables submitted to EPA under this Order shall, on approval or modification by EPA, be incorporated into and enforceable under this Order. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Order, the approved or modified portion shall be incorporated into and enforceable under this Order.

43. Neither failure of EPA to expressly approve or disapprove of Respondent's submissions within any time period, nor the absence of comments, shall be construed as approval by EPA. Whether or not EPA gives express approval for Respondent's deliverables, Respondent is responsible for preparing deliverables acceptable to EPA.

44. Respondent shall, prior to any off-Site shipment of hazardous substances from the Site to an out-of-state waste management facility, provide written notification of such shipment to the appropriate state environmental official in the state wherein the receiving facility is located and to EPA's RPM. However, the notification of shipments shall not apply to any such off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

(a) Respondent's written notification shall, at a minimum, include the following information: (1) the name and location of the facility to which the hazardous substances are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the hazardous substances; and (4) the method of transportation. Respondent shall notify the state previously provided written notice pursuant to this Paragraph of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state, or to a facility in another state.

(b) Respondent shall provide to its respective contractors and sub-contractors all relevant information, including the information under the categories noted in Subparagraph (a) above, on the off-Site shipments, as soon as practical after the award of the contract and before the hazardous substances are actually shipped.

c) Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-Site location, Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall send hazardous substances, pollutants, or contaminants from the Site only to an off-Site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

X. MODIFICATIONS

45. If at any time during the RI or FS process, Respondent identifies a need for additional data, Respondent shall submit a memorandum documenting the need for additional data to the EPA RPM within thirty (30) days of identification. EPA in its discretion will determine whether the

additional data will be collected by Respondent and whether it will be incorporated into any respective plans, reports and other deliverables.

46. In the event of conditions posing an immediate threat to human health or welfare or the environment, Respondent shall notify EPA and the State immediately. In the event of unanticipated or changed circumstances at the Site, Respondent shall notify the EPA RPM by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In addition to the authorities in the NCP, in the event that EPA determines that the immediate threat or the unanticipated or changed circumstances warrant changes in any work plan, EPA shall modify or amend the work plan in writing accordingly. Respondent shall perform each approved work plan as modified or amended.

47. EPA may determine that in addition to tasks defined in this Order or the SOW, additional work may be necessary to protect human health and the environment. If EPA determines that additional investigation activities are necessary to protect human health and the environment or for the completion of the RI/FS, EPA may require Respondent to submit a workplan for additional investigation activities. EPA may also require Respondent to modify any plan, design, or other deliverable required by this Order. EPA reserves the right to conduct the work itself at any point, to seek reimbursement from Respondent, and/or to seek any other appropriate relief.

48. No later than thirty (30) days after receiving EPA's notice that additional response activities are required pursuant to this Section, Respondent shall submit a workplan for the response activities to EPA for review and approval. Upon approval by EPA, the workplan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Upon approval of the workplan by EPA, Respondent shall implement the workplan according to the standards, specifications, and schedule in the approved workplan. Respondent shall notify EPA of its intent to perform such additional response activities within 15 days after receipt of EPA's request for additional response activities.

XI. FINAL REPORTS, PROPOSED PLANS, RECORD OF DECISION AND ADMINISTRATIVE RECORD

49. EPA is responsible for the release to the public of information concerning the Work performed pursuant to this Order. EPA also is responsible for the preparation and release to the public of the proposed plan and record of decision in accordance with CERCLA and the NCP.

50. EPA will determine the contents of the administrative record file for selection of any response action. Respondent must submit to EPA documents developed during the course of the RI or FS. Respondent shall provide copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports and other reports. Respondent must additionally submit any previous studies conducted under state, local or other federal authorities relating to selection of the response action, and all communications between Respondent and state, local or other federal authorities concerning selection of the response action.

XII. PROGRESS REPORTS AND MEETINGS

51. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

52. In addition to the plans, reports and other deliverables set forth in this Order, Respondent shall provide to EPA quarterly progress reports by the 20th day of January, April, July, and October. Upon request from Respondent, EPA may alter the due dates for these progress reports or allow their incorporation into other reports submitted by Respondent. At a minimum, with respect to the period since the last report, these progress reports shall: (a) describe the actions that have been taken to comply with this Order; (b) describe work planned for the next quarter with schedules relating such work to the overall project schedule for the Work; and (c) describe all problems encountered and any

anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays. These reports shall not be considered a substitute for notification to EPA in the event of an occurrence requiring emergency response. In addition, more frequent progress reports may be required during performance of certain Work activities.

XIII. QUALITY ASSURANCE, SAMPLING, ACCESS, AND DATA AVAILABILITY/ADMISSIBILITY

53. Respondent shall use the quality assurance, quality control, and chain of custody procedures described in the "EPA Requirements for Quality Assurance Project Plans (QA/R-5),(EPA/240/B-01/003, March 2001) and "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and any amendments to these documents, while conducting all sample collection and analysis activities required herein by any plan. To provide quality assurance and maintain quality control, Respondents shall:

a) use only laboratories that have a documented quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP) to meet the quality system requirements;

b) ensure that the laboratory used by the Respondents for analyses performs according to a method or methods deemed satisfactory to EPA, submits all protocols to be used for analyses to EPA at least 14 days before beginning analysis, and maintains protocols according to the record preservation requirements included in Section XIV;

c) ensure that EPA personnel and EPA's authorized representatives are allowed access to the laboratory and personnel utilized by the Respondents for analyses.

54. All results of sampling, tests, modeling or other data (including raw data) generated by Respondent, or on Respondent's behalf, during the period that this Order is in effect, shall be submitted to EPA in the next quarterly progress report as described in Section XII of this Order unless EPA otherwise directs Respondent in writing.

55. Respondent shall verbally notify EPA at least 15 days prior to conducting significant field events as described in the SOW, work plan or sampling and analysis plan. At EPA's verbal or written request, or the request of EPA's contractor, Respondent shall allow split or duplicate samples to be taken by EPA (and its authorized representatives) of any samples collected by Respondent in implementing this Order. All split samples shall be analyzed by the methods identified in the Quality Assurance Project Plan ("QAPP"). Nothing herein shall be construed to limit EPA's right to take any additional samples that EPA deems necessary.

56. Respondent shall submit to EPA all documents and information related to the Work performed pursuant to this Order including, but not limited to copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports and other reports. Respondent also shall submit any documents and information related to response actions previously undertaken at the Site under state, local or other federal authorities that are relevant to the Work performed pursuant to this Order, and all communications between Respondent and state, local or other federal authorities relevant to such Work.

57. Respondent may assert a claim of business confidentiality covering part or all of the documents or information submitted to EPA pursuant to this Order to the extent permitted by, and in accordance with the requirements of, section 104(e)(7) of CERCLA, 42 U.S.C. Section 9604(e)(7), and 40 C.F.R. Section 2.203(b). Respondent shall segregate and clearly identify all documents or information submitted pursuant to this Order for which Respondent asserts business confidentiality claims. Documents or information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality

accompanies the documents or information when it is submitted to EPA, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104 of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information by EPA or the state without further notice to Respondent. Respondent shall not assert any confidentiality claims with respect to any data including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data.

58. Respondent shall maintain for the period during which this Order is in effect, an index of documents that the Respondent claims contain confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the document. Upon written request from EPA, Respondent shall submit a copy of the index to EPA.

59. Respondent may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondent asserts such a privilege in lieu of providing documents, it shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged; and no claim of privilege shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data.

60. If the Site, or any other property where access is needed to implement this Order, is owned or controlled by Respondent, Respondent shall, commencing on the Effective Date, provide EPA and its representatives, including contractors, with access at all reasonable times to the Site, or

such other property, for the purpose of conducting any activity related to this Order, including: (a) inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Work or Respondent and its representatives or contractors pursuant to this Order; (b) reviewing the progress of Respondent in carrying out the terms of this Order; (c) conducting tests as EPA or its authorized representatives or contractors deem necessary; (d) using a camera, sound recording device or other documentary type equipment; and (e) verifying the data submitted to EPA by Respondent.

61. Where any action under this Order is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements. Respondent shall immediately notify EPA if, after using its best efforts, it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing its efforts to obtain access. If Respondent cannot obtain access agreements, EPA may either: (i) obtain access for Respondent or assist Respondent in gaining access to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate; or (ii) perform those tasks or activities with EPA contractors. Respondent shall reimburse EPA for all costs and attorneys' fees incurred by the United States in obtaining such access. If EPA performs those tasks or activities with EPA contractors, Respondent shall perform all other tasks or activities not requiring access to that property, and shall reimburse EPA for all costs incurred in performing such tasks or activities. Respondent shall integrate the results of any such tasks or activities undertaken by EPA into its plans, reports and other deliverables. Notwithstanding any provision of this Order, EPA retains all of its access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XIV. RECORD PRESERVATION

62. Respondent shall preserve and retain for a minimum of ten (10) years after

commencement of construction of any remedial action all non-identical copies of documents, records, and other information (including documents, records, or other information in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work. Respondent also shall instruct its contractors and agents to preserve for a minimum of ten (10) years after commencement of construction of any remedial action all documents, records, and other information of whatever kind, nature or description relating to performance of the Work. At the conclusion of this document retention period, Respondent shall notify EPA at least ninety (90) days prior to the destruction of any such documents, records or other information. At EPA's request, and at no cost to EPA, Respondent shall deliver any such documents, records, or other information to EPA.

XV. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

63. In the event of any action or occurrence during performance of the Work that causes or threatens a release of a hazardous substance from the Site, that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent also shall immediately notify the EPA RPM of the incident or Site conditions and, in the event of his or her unavailability, the Regional Duty Officer, Emergency Response Program, EPA Region IX, at (800) 300-2193. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP.

64. In addition, Respondent shall submit a written report to EPA within 7 Days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such

a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

XVI. EPA REVIEW OF SUBMISSIONS

65. After review of any plan, report or other item that is required to be submitted for approval pursuant to this Order, in a notice to Respondent EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission subject to specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, and direct that Respondent modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within fifteen (15) days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

66. On approval, approval subject to conditions, or modification by EPA, pursuant to Paragraph 65, Respondent shall proceed to implement any action required by the plan, report or other deliverable, as approved or modified by EPA. Following EPA approval or modification of a submission or portion thereof, Respondent shall not thereafter alter or amend such submission or portion thereof unless directed by EPA.

67. On receipt of a notice of disapproval, Respondent shall, within fifteen (15) days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Respondent shall not proceed with any activities or tasks until receiving EPA approval, approval on condition or modification. While awaiting EPA approval, approval on condition or modification of deliverables, Respondent shall proceed with all other tasks and activities

that may be conducted independently in accordance with the schedule set forth under this Order. Respondent shall continue implementation of any activities or tasks regarding the Site that EPA approved prior to issuing this Order; however, EPA reserves the right to stop Respondent from proceeding, either temporarily or permanently, on any task, activity or deliverable at any point during the RI or FS.

68. If EPA disapproves a resubmitted plan, report or other deliverable, or portion thereof, EPA may again direct Respondent to correct the deficiencies. EPA also shall retain the right to modify or develop the plan, report or other deliverable, and Respondent shall implement any such plan, report, or deliverable as ultimately corrected, modified or developed by EPA. If any re-submission pursuant to this Paragraph is disapproved by EPA pursuant to Paragraph 65 of this Order, Respondent shall be deemed to be in violation of this Order.

XVII. COMPLIANCE WITH APPLICABLE LAWS

69. Respondent shall comply with all applicable local, state and federal laws and regulations when performing the RI and FS. EPA has determined that the activities contemplated by this Order are consistent with the NCP. No local, state, or federal permit shall be required for any portion of any action conducted entirely on-Site, including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work is to be conducted off-Site and requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XVIII. REMEDIAL PROJECT MANAGER

70. All communications, whether written or oral, from Respondent to EPA shall be directed to EPA's RPM and include the Project Manager for the State of California Department of Toxic Substances Control ("DTSC") as a recipient. Respondent shall submit to EPA three copies and to DTSC one copy of all documents, including plans, reports, and other correspondence, which are developed pursuant to this Order, and shall send these documents by certified mail, return receipt requested or overnight delivery. Documents which Respondent has in electronic form shall also be sent by electronic mail. For purposes of the RI/FS, EPA's RPM is:

Holly Hadlock
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street SFD 8-2
San Francisco, CA 94105
Phone: (415) 972-3171
Fax: (415) 947-3526
E-Mail: Hadlock.Holly@epa.gov

For purposes of the RI/FS, documents sent to DTSC should be addressed to:

Jessy Fierro, or current Project Manager
Brownfields & Environmental Restoration Program
California Department of Toxic Substances Control
9211 Oakdale Avenue
Chatsworth, CA 91311
Phone: (818) 717-6563
Fax: (818) 717-6557
E-Mail: jfierro@dtsc.ca.gov

71. EPA has the unreviewable right to change its RPM. If EPA changes its RPM, EPA will inform Respondent in writing of the name, address, and telephone number of the new RPM.

72. EPA's RPM shall have the authority lawfully vested in a RPM by the NCP, 40 C.F.R. Part 300. EPA's RPM shall have authority, consistent with the NCP, to halt any work required by this Order, and to take any necessary response action.

XIX. DELAY IN PERFORMANCE

73. Any delay in performance of this Order that, in EPA's discretion, is not properly justified by Respondent under the terms of this Section shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

74. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's RPM within 48 hours after any Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within 5 business days after notifying EPA by telephone, Respondent shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. EPA may, in its sole and unreviewable discretion, grant an extension of any schedule for good cause shown. Increased costs or expenses associated with implementation of the activities called for in this Order are not a justification for any delay in performance.

XX. ASSURANCE OF ABILITY TO COMPLETE WORK

75. Respondent shall demonstrate the ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to EPA within 60 days after the effective date of the Order, one of the following: (1) a performance bond; (2) a letter of credit; (3) a trust agreement; (4) a guarantee by a third party; or (5) internal financial information to allow EPA to determine that Respondent has sufficient assets available to perform the Work. Respondent shall demonstrate financial assurance in an amount to be

determined by EPA. If Respondent seeks to demonstrate ability to complete the remedial action by means of internal financial information, or by guarantee of a third party, Respondent shall re-submit such information annually, on the anniversary of the effective date of this Order. If EPA determines that such financial information is inadequate, Respondent shall, within thirty (30) days after receipt of EPA's notice of determination, obtain and present to EPA for approval one of the other four forms of financial assurance listed above.

XXI. INSURANCE

76. At least seven (7) days prior to commencing any Work at the Site pursuant to this Order, Respondent shall secure, and shall maintain for as long as Respondent is required to perform Work under this Order, comprehensive general liability insurance and automobile insurance with limits of two million dollars ($2,000,000), combined single limit, naming EPA as an additional insured. Within the same time period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for as long as Respondent is required to perform Work under this Order, Respondent shall satisfy, or shall ensure that its contractors or subcontractors performing Work pursuant to this Order satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Order. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above that is not maintained by such contractor or subcontractor.

XXII. REIMBURSEMENT OF RESPONSE COSTS

77. Respondent shall reimburse EPA, on written demand, for all Response Costs incurred by the

United States in overseeing Respondent's implementation of the requirements of this Order or in performing any response action which Respondent fails to perform in compliance with this Order. Response Costs are all costs including, but not limited to, direct and indirect costs and interest, that EPA incurs in overseeing Respondent's implementation of the requirements of this Order, including reviewing or developing plans, reports and other items pursuant to this Order, verifying the Work, or otherwise implementing, overseeing, or enforcing this Order or in performing any response action which Respondent fails to perform in compliance with this Order.

78. On a periodic basis, EPA may submit to Respondent bills for response costs that include an itemized Cost Summary.

79. Respondent shall, within thirty (30) days of receipt of each bill, remit a certified or cashier's check for the amount of those costs. Interest shall accrue from the later of the date that payment of a specified amount is demanded in writing or the date of the expenditure. The interest rate is the rate established by the Department of the Treasury pursuant to 31 U.S.C. § 3717 and 4 C.F.R. § 102.13.

80. The Respondent shall make payments payable to the Hazardous Substances Superfund and mail payments to:

US Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
PO Box 979076
St. Louis, MO 63197-9000

Payment to EPA may instead be made by check sent by Overnight Delivery or by Electronic Funds Transfer ("EFT" or "wire transfer") in accordance with instructions provided by the RPM to Respondent in the first bill for response costs. Any EFT received after 11:00 A.M. (Eastern Time) will be credited on the next business day. All payments to the United States under this

Paragraph shall reference the name and address of the party making payment, the Pacific Coast Pipeline Superfund Site, Site # CAD980636781 and EPA Docket # 2009-14. Respondent shall, at the time payment is made, send to the RPM a copy of a check or a written notice of the EFT.

81. In the event that the payments for response costs are not made as required above, Respondent shall pay interest on the unpaid balance. Interest is established at the rate specified in Section 107(a) of CERCLA. Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section.

XXIII. UNITED STATES NOT LIABLE

82. The United States and EPA, by issuance of this Order, assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent, its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order. Neither the United States nor EPA may be deemed a party to any contract entered into by the Respondent, its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order. Nothing in this Order shall constitute a satisfaction of or release from any claim or cause of action against the Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under section 106(a) and 107(a) of CERCLA, 42 U.S.C. § 9606(a) and 9607(a).

XXIV. ENFORCEMENT AND RESERVATIONS

83. EPA reserves the right to bring an action against Respondent under section 107 of CERCLA,

42 U.S.C. § 9607, for recovery of any response costs incurred by the United States and not reimbursed by Respondent. This reservation shall include, but not be limited to, past costs, future costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demand, as well as accrued interest as provided in section 107(a) of CERCLA, 42 U.S.C. § 9604(e).

84. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondent for its costs, or seek any other appropriate relief.

85. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional orders, and additional remedial or removal actions as EPA may deem necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9606(a), et seq., or any other applicable law. Respondent shall be liable under CERCLA section 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

86. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

87. Violation of any provision of this Order may subject Respondent to civil penalties of up to $37,500 per violation per day, as provided in section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Respondent may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondent violate this Order or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to section 104

of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to section 106 of CERCLA, 42 U.S.C. § 9606.

88. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

89. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXV. EFFECTIVE DATE AND COMPUTATION OF TIME

90. This Order shall be effective on September 28, 2009. All times for performance of ordered activities shall be calculated from this effective date.

XXVI. OPPORTUNITY TO CONFER

91. Respondent may request a conference with EPA to discuss this Order, to convene not later than October 9, 2009, at EPA Region IX's office at 75 Hawthorne Street, San Francisco, California. The Superfund Division Branch Chief, or his/her designee will attend the conference.

92. The purpose and scope of the conference shall be limited to issues involving the response actions required by this Order and the extent to which Respondent intends to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondent a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondent's request, Respondent may appear in

person or by an attorney or other representative.

XXVII. NOTICE OF COMPLETION OF WORK

93. When EPA determines that all Work has been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order (such as the retention of records), EPA will provide written notice to Respondent. If EPA determines that any such Work has not been completed in accordance with this Order, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent to correct such deficiencies, in accordance with the provisions of Section XVI. Failure by Respondent to correct deficiencies as required by EPA shall be a violation of this Order.

So Ordered, this 24th day of September, 2009.

BY: _____

Michael M. Montgomery
Assistant Director
Federal Facilities & Site Cleanup Branch
Superfund Division
U.S. Environmental Protection Agency

Appendix A

Statement of Work

Supplemental Remedial Investigation/Feasibility Study

Pacific Coast Pipeline
Fillmore, California

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LIST OF ACRONYMS AND ABBREVIATIONS

ARAR	Applicable or Relevant and Appropriate Requirement
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
FS	Feasibility Study
FSP	Field Sampling Plan
GWTS	groundwater treatment system
HASP	Health and Safety Plan
µg/L	micrograms per liter
mg/m^3	milligrams per cubic meter
ORC	Oxygen Release Compound
QAPP	Quality Assurance Project Plan
ppmv	parts per million by volume
RI	Remedial Investigation
ROD	Record of Decision
SOW	Statement of Work
SVE	soil vapor extraction

1. Introduction

The Pacific Coast Pipeline Superfund Site (Site) is located in Fillmore, California. This Statement of Work (SOW) describes the past cleanup activities at the Site and the work required to support the completion of the focused Remedial Investigation/Feasibility Study (RI/FS) for the shallow soil (10' deep) and groundwater at the Site. Based on preliminary field work, contamination remains in the shallow soil. The purpose of the focused RI/FS is to characterize the risk posed by the contamination and to evaluate potential remedial options. Additionally, the groundwater remedy selected in the 1992 Site Record of Decision (ROD) was not effective in cleaning up the groundwater to established drinking water standards, so further evaluation is required in order to select a remedy capable of meeting these standards. This SOW is to be implemented pursuant to a Unilateral Administrative Order (UAO), issued under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

1.1 Site Description

The Site is located just east of the City of Fillmore in Ventura County, California. The land use for the surrounding area is mixed. The Site property is bounded by agricultural land to the east, open space to the north, a Ventura County Transportation Commission rail line, State Highway 126, and commercial and residential properties to the south, and Pole Creek to the west. Residential properties and San Cayetano Elementary School are west of Pole Creek. Pole Creek, which is contained in a concrete flood-control channel, drains into the Santa Clara River approximately one half mile south of the Site.

1.2 Site Background

Texaco, which merged with the Chevron Corporation, owned and operated a petroleum refinery at the Site from the early 1900s to 1951. The primary refinery products were gasoline, diesel, and fuel oil. In 1951 the refinery was shut down and dismantled. From 1952 to 2002 the Site was used by Texaco and/or its affiliates as a crude oil pumping station. Site structures included buried pipelines, pumping equipment, above-ground storage tanks, and miscellaneous buildings. The last remaining crude oil tank was dismantled and removed in August 2004.

Wastes from the refinery process are believed to have consisted primarily of tank bottoms, filter clays, and sludges. These refinery wastes were disposed of on-site in a large main waste pit located on the western border of the Site and in eight smaller unlined sumps and pits located throughout the Site. Crude oil was stored in eight above-ground storage tanks.

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1.3 Past Cleanup Activities

From 1983 to 1989 Texaco, under the direction of California Department of Health Services (DHS) and the Regional Water Quality Control Board, conducted a groundwater and soil assessment. Three groundwater monitor wells were installed and up to 5,800 µg/L benzene was detected in groundwater.

In 1986, under the direction of the DHS, Texaco removed 38,000 cubic yards of waste material and contaminated soils from the main waste pit and other disposal areas. This soil removal completed the soil excavation activities that were required at that time. Texaco installed 34 additional monitor wells as part of the site investigation. In 1989 the Site was placed on the National Priorities List. Pursuant to an EPA Administrative Order on Consent for Remedial Investigation and Feasibility Study issued in November 1989, Texaco performed some early remedial design activities. These included: 1) preparation of a Preliminary Remedial Design Work Plan; 2) design, implementation, monitoring, and reporting on a pilot study to determine the effectiveness of SVE; 3) design of the SVE system; and 4) design of the groundwater extraction and treatment system.

On March 31, 1992, EPA signed the ROD for the Site. The remedial action objectives were to control further migration of the contaminated groundwater, prevent further migration of contamination in soil to groundwater, and recover and treat contaminated groundwater until the aquifer is restored and groundwater contamination is below cleanup levels. The cleanup levels established in the ROD are the federal and state drinking water standards. EPA selected a remedy that includes the following:

- construction and operation of a groundwater extraction and treatment system;
- discharge of treated groundwater to the aquifer or reuse in a beneficial manner;
- soil vapor extraction (SVE) for those soil areas that threaten to contaminate groundwater;
- groundwater monitoring to demonstrate that the extraction system is effectively capturing the contaminant plume; and
- maintenance of perimeter fencing at the Site until cleanup standards are met.

At the time the ROD was signed, EPA anticipated that the groundwater would be restored to the cleanup standards in 30 years.

EPA issued the August 1993 Consent Decree after the ROD was signed. This Consent Decree directed Texaco to install a groundwater extraction and treatment system and an SVE system as specified in the ROD. The remedial work was conducted in two phases, a pilot study and the implementation of the pilot study results. The objective of Phase 1 was to provide data necessary for the design of the Phase 2 system while achieving some remediation in the interim.

In December 1993 the Phase 1 groundwater treatment system (GWTS) began operating. The extracted groundwater was treated with granular activated carbon and discharged to Pole Creek under a National Pollutant Discharge Elimination System permit. In 1994 the Phase 1 SVE system operations began. Several types of soil vapor treatment systems were operated at the Site to determine the optimum equipment for Phase 2 operations. Equipment tested at the Site included a regenerative thermal oxidation unit, internal combustion engines (VR Systems), and thermal oxidation units (King Buck/Hasstech and Baker Furnace).

In May 1995 the Phase 2 SVE commenced. SVE wells were used in the three target areas evaluated in Phase 1 and the Baker Furnace thermal oxidation unit was selected for the soil vapor

treatment. In November 1995 the Phase 2 GWTS began operating. The Phase 2 groundwater system was similar to the Phase 1 system, but it had an increased capacity and several operational modifications to improve performance. The Site achieved construction completion status when the Preliminary Close Out Report was signed on September 27, 1996.

The SVE system reached the shut-off criteria, i.e., benzene less than 100 mg/m^3 (31 ppmv), in January 2002. Soil gas concentrations were monitored monthly for eight months following SVE system shut-off. No rebound above 100 mg/m^3 was observed and soil vapor monitoring was discontinued in November 2002. The GWTS operated as designed through October 2002, at which time EPA determined that the ROD cleanup goals could not be achieved by the GWTS. Continued monitoring indicated that the footprint of the groundwater plume remained stable and that concentrations of benzene, the primary contaminant, did not increase. Current benzene concentrations in groundwater range up to 390µg/L, a reduction of greater than 90% compared to dissolved benzene concentrations prior to operation of the GWTS and SVE system.

1.4 Post-ROD Investigations

In 2003 and 2004 an Oxygen Release Compound (ORC) injection pilot test was performed at the Site in an effort to clean up benzene remaining in groundwater. ORC injection performed below expectations. Evaluation of the data from the pilot test indicated that the oxygen demand for the saturated zone at this depth was considerably higher than anticipated. Therefore, ORC enhancement was no longer considered as a potential remedial alternative at the Site. (For more information about the ORC pilot test, see *Evaluation of the Enhanced Bioattentuation Pilot Study, Pacific Coast Pipeline Superfund Site, May 26, 2005*).

As the 1992 ROD did not address risk to human health and the environment from exposure to contaminated surface soil, EPA directed Chevron to characterize the site surface soils in order to determine if additional cleanup is required. In 2005 Chevron began a multi-phased shallow soil investigation in the former refinery area in order to assess the potential risk to human health and the environment. Phase 1 focused on the soil under the former storage tanks, Phase 2 included an in-depth review of site historical operations and shallow soil sampling across the site, and Phase 3 addressed data gaps from the previous investigation phases. Chevron submitted the *Phase 3 Shallow Soil Investigation Report/Human Health Risk Assessment* to EPA in May 2009 and EPA is currently reviewing it.

In 2005 EPA directed Chevron to determine if there is a potential for soil vapor intrusion into residences near the groundwater contamination. Chevron completed the investigation in 2007 and determined that while vapor (primarily xylene and toluene) from groundwater is migrating up into the deeper soils (40 – 60 ft bgs) directly above the plumes, it is attenuating in the soil and does not pose a risk to nearby residents. The investigation also confirmed that the benzene in groundwater is naturally attenuating.

2. Remedial Investigation Status

As described in paragraph 1.4, Respondent has already performed extensive post-ROD field investigations and site work that is relevant to preparation of the Remedial Investigation (RI)

Report. If, after reviewing all relevant information, EPA determines that additional field activities are necessary in order to complete the RI, the Respondent shall perform such field work as directed by EPA after being provided an opportunity to meet with EPA to discuss the determination. The deliverable schedule may be modified as provided in the UAO, should additional field work be necessary. The Respondent shall furnish all necessary personnel, materials, and services needed, or incidental to, performing the field work. All work performed under the SOW will be under the direction and supervision of qualified personnel.

The Respondent shall produce deliverables to EPA for review and approval that are in accordance with the UAO, this SOW, and appropriate guidance and reference documents (see Attachment 1, Regulations and Guidance Documents). Table 1 is a list of deliverables and due dates. All technical reports and other deliverables will be prepared under the direction and supervision of a California Professional Engineer or Professional Geologist.

3. Site-Specific Plans

3.1 Field Sampling Plan and Quality Assurance Project Plan

If further field work is required, the Respondent shall submit a draft Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP) for EPA review prior to conducting field activities. The Respondent shall revise the draft FSP and QAPP according to EPA comments and submit final plans for EPA review and approval. The final FSP and QAPP are due within 30 days of receipt of EPA comments on the draft version of these documents.

3.2 Health and Safety Plan

The Respondent has submitted to EPA a Site Health and Safety Plan (HASP), dated July 21, 2005, (Revised October 3, 2006). The Respondent shall review the HASP and confirm in writing 30 days after issuance of the UAO that it is current and contains the following information:

1. How workers will be protected during any site activities through the identification, evaluation, and control of health and safety hazards;

2. An emergency response plan describing how to handle potential site emergencies and how to minimize the risks associated with a response; and

3. Health and safety requirements for site visitors.

EPA does not provide approval of HASPs. Each employer, contractor, and subcontractor is responsible for ensuring that workers follow applicable Federal and State worker health and safety regulations.

4. Groundwater Monitoring Reports

The Respondent is already submitting groundwater monitoring data reports on a quarterly basis pursuant to Consent Decree CV 93-2990-JSL (SHx), entered on August 11, 1993. The Respondent shall continue to submit quarterly groundwater monitoring data reports for purposes of this SOW. The groundwater monitoring data reports submitted under this SOW will include, at a minimum: information on the sampling and analysis methods used, groundwater levels, chemical and groundwater level temporal trends, analytical results, and data quality assessment. Not all monitoring wells will be sampled each quarter; see Table 2 for the groundwater monitoring schedule applicable under this SOW.

5. Status Reporting

The Respondent shall submit quarterly status reports for any field work conducted. At a minimum, these quarterly reports will include:

1. Progress made during the quarter;

2. Work planned for the next quarter; and

3. Problems encountered, problems anticipated, and solutions to address delays or problems.

The reports will be due to EPA twenty (20) days after the end of each quarter.

6. Waste Disposal

Any waste generated from field activities will be properly managed and tested to confirm disposal requirements. Prior to shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, the Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C §9621 (d)(3), and 40 C.F.R §300.440.

7. Sample Analysis

The Respondent shall arrange for and carry out the environmental analyses of samples collected for the groundwater monitoring in accordance with the FSP and QAPP. The sample analysis task begins with the Respondent arranging the sample analysis work with a state-accredited laboratory and completing the field sampling program. The task ends with the Respondent verifying that the laboratory completed the requested analyses, submitted all sample data packages for third party validation, and submitted unvalidated data to EPA. For the purposes of the SOW, "third party" is defined as any party other than the entity performing the laboratory analysis.

8. Data Validation

The Respondent shall arrange for and carry out third party validation of the analytical data received from the laboratory following any field sampling events, according to the EPA-approved FSP and QAPP. The sample validation task begins with the Respondent transmitting all data packages received from the laboratory to the third party validator for validation in accordance with EPA's National Functional Guidelines for Data Review. This task ends with the Respondent providing EPA with data validation reports.

9. Community Involvement

EPA will maintain lead responsibility for community involvement activities at the Site. Given the Respondent's ability to complete the requirements described in this SOW and their knowledge of daily activities at the Site, the Respondent may be requested to provide support to EPA in preparation and dissemination of fact sheets, flyers, power point presentations, and other audiovisual materials designed to apprise the community of current or proposed activities. In advance of the publication of any material to the community, EPA will provide an advance copy of such material to Respondent and request comments concerning the accuracy of such material. Any comments from Respondent will be provided to EPA within 30 days of receipt of such material.

EPA may request the Respondent to prepare, for EPA review and approval, an informational fact sheet for distribution to residents and businesses in neighborhoods that will be affected by field activities. The fact sheet will explain the basic details of the activities and provide appropriate contact information three weeks in advance of scheduled activities. The Respondent will notify affected residents and businesses of field activities a minimum of one week in advance of scheduled work via door hangers or flyers distributed door-to-door. All community involvement activities conducted by the Respondent will be subject to EPA oversight.

10. Risk Assessment

The Respondent has submitted to EPA a draft risk assessment as part of the Phase 3 Report. This risk assessment will be used to determine whether further remediation is necessary at the Site, provide justification for performing remedial action, and determine what exposure pathways need to be remediated. The Respondent shall revise the draft risk assessment according to EPA comments and submit the final risk assessment as part of the draft RI.

The risk assessment will include the following: hazard identification, dose-response assessment, conceptual exposure/pathway analysis, characterization of site and potential receptors, exposure assessment, risk characterization, and identification of limitations/uncertainties.

11. Reuse Assessment

The Respondent shall submit a reuse assessment memo for the Site, following EPA's *Reuse Assessment Guide*, June 2001, OSWER 9355.7-06P. This will involve collecting and evaluating

information to develop assumptions about reasonable anticipated future land use(s) at the Site. This assessment will be due September 30, 2009.

12. Remedial Action Objectives

The Respondent shall develop remedial action objectives (RAOs) with medium-specific goals for protecting human health and the environment. The RAOs should be as specific as possible but not so specific that the range of alternatives that can be developed is unduly limited. The Respondent shall submit a technical memo identifying RAOs with justification for their selection. This technical memo will be due within 30 days of receipt of the ARARs from the State, but no earlier than September 30, 2009.

13. Remedial Investigation/Feasibility Study Report

Upon receiving comments from EPA on the *Phase 3 – Shallow Soil Investigation Report*, the Respondent shall prepare a combined RI/FS report that incorporates EPA comments and is consistent with EPA's October 1988 *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA*. The Respondent shall submit the draft RI/FS report within 60 days of receipt of EPA comments on the Phase 3 Report, but no earlier than November 24, 2009. The final RI/FS report is due within 45 days of receipt of EPA comments on the draft RI/FS report.

13.1 Remedial Investigation Report

The RI Report will include a summary of all data generated up to 2005. For data generated since 2005 (Phase 1 start), the Report will describe the sampling conducted and the results. It will also include a site conceptual model, a baseline risk assessment, and an evaluation of remedial action objectives. The contents of the RI Report will include the following elements:

1. Executive Summary

2. Introduction

3. Study Area Investigation

4. Physical Characteristics of the Study Area

5. Nature and Extent of Contamination

6. Contaminant Fate and Transport
   Potential Routes of Migration
   Contaminant Persistence
   Contaminant Migration

7. Baseline Risk Assessment

Human Health Evaluation
Environmental Evaluation

8. Summary and Conclusions
   Data Limitations
   Recommendations for Future Work
   Preliminary Identification of ARARs
   Preliminary Identification of Institutional Controls
   Recommended Remedial Action Objectives

Appendices
A. Technical Memorandum on Field Activities (if available)
B. Analytical Data and QA/AC Evaluation Results
C. Risk Assessment Methods

13.2 Focused Feasibility Study

The focused FS will contain the following information:

1. Executive Summary

2. Summary of past and present response actions

3. Summary of feasibility study objectives

4. Summary of remedial action objectives and identification of ARARs

5. Potential future land use

6. Description of general response actions

7. Identification & screening of remedial technologies

8. Development and remedial alternatives description, including institutional controls

9. Detailed analysis of remedial alternatives

The Respondent shall perform a detailed analysis of the remedial alternatives against the nine evaluation criteria. Once the alternatives have been assessed against the nine criteria, the Respondent shall conduct a comparative analysis to evaluate the relative performance of each alternative in relation to each specific evaluation criterion. The Respondent shall conduct any treatability studies needed to fully evaluate treatment alternatives.

10. Summary and Conclusions

14. Treatability Studies

The Respondent shall conduct treatability studies to fully evaluate treatment alternatives, if EPA determines such studies are necessary to choose a remedy in the FS process. If, after reviewing all relevant information, EPA determines that a site specific treatability study is required in order to complete the FS process, the Respondent shall perform such a study as directed by EPA after being provided an opportunity to meet with EPA to discuss the determination. The deliverable schedule may be modified as provided in the UAO, should a treatability study be necessary before completing the FS. A site-specific treatability study may be deferred, at the discretion of EPA, to the remedial design process, which is not covered by this order.

15. References

US EPA. *Second Five-Year Review Report.* Superfund Division. September 2006.

URS. *Phase 3 – Shallow Soil Investigation: Data Gap Sampling and Human Health Risk Assessment, PCPL Superfund Site, Fillmore, California.* May 8, 2009.

URS. *Report of Natural Attenuation Characteristics and Soil Vapor Characteristics Above Dissolved-Phase Benzene Plume, PCPL Superfund Site, Fillmore, California*. November 14, 2007.

URS. *Quarterly Groundwater Monitoring Report for First Quarter 2009, PCPL Superfund Site, Fillmore, California.* May 15, 2009.

England Geosystem. *Evaluation of the Enhanced Bioattentuation Pilot Study, Pacific Coast Pipeline Superfund Site, Fillmore, California.* May 26, 2005.

Attachment 1

Regulations and Guidance Documents

The following list, although not comprehensive, consists of many of the regulations and guidance documents that apply to the RI/FS process:

1. American National Standards Practices for Respiratory Protection. American National Standards Institute Z88.2 1980, March 11, 1981.

2. CERCLA Compliance with Other Laws Manual, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (DRAFT), OSWER Directive No. 9234.1 01 and 02.

3. Community Relations in Superfund - A Handbook, U.S. EPA, Office of Emergency and Remedial Response, January 1992, OSWER Directive No. 9230.0-3C.

4. A Compendium of Superfund Field Operations Methods, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P 87/001a, August 1987, OSWER Directive No. 9355.0 14.

5. Construction Quality Assurance for Hazardous Waste Land Disposal Facilities, U.S. EPA, Office of Solid Waste and Emergency Response, October 1986, OSWER Directive No. 9472.003.

6. Contractor Requirements for the Control and Security of RCRA Confidential Business Information, March 1984.

7. Data Quality Objectives for Remedial Response Activities, U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G 87/003, March 1987, OSWER Directive No. 9335.0 7B.

8. Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, U.S. EPA Region IV, Environmental Services Division, April 1, 1986 (revised periodically).

9. EPA NEIC Policies and Procedures Manual, EPA 330/9 78 001 R, May 1978, revised November 1984.

10. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive NO. 9355.3 01.

11. Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potential Responsible Parties, U.S. EPA Office of Emergency and Remedial Response, EPA/540/G-90/001, April 1990.

12. Guidance on Expediting Remedial Design and Remedial Actions, EPA/540/G-90/006, August 1990.

13. Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites, U.S. EPA Office of Emergency and Remedial Response (DRAFT), OSWER Directive No. 9283.1 2.

14. Guide for Conducting Treatability Studies Under CERCLA, U.S. EPA, Office of Emergency and Remedial Response, Prepublication version.

15. Guide to Management of Investigation-Derived Wastes, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.

16. Guidelines and Specifications for Preparing Quality Assurance Project Plans, U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS 004/80, December 29, 1980.

17. Health and Safety Requirements of Employees Employed in Field Activities, U.S. EPA, Office of Emergency and Remedial Response, July 12, 1982, EPA Order No. 1440.2.

18. Interim Guidance on Compliance with Applicable of Relevant and Appropriate Requirements, U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0 05.

19. Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, U.S. EPA, Office of Emergency and Remedial Response, QAMS 005/80, December 1980.

20. Methods for Evaluating the Attainment of Cleanup Standards: Vol. 1, Soils and Solid Media, February 1989, EPA 23/02-89-042; vol. 2, Ground Water (Jul 1992).

21. National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, Federal Register 40 CFR Part 300, March 8, 1990.

22. NIOSH Manual of Analytical Methods, 2nd edition. Volumes I VII for the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.

23. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.

24. Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, February 19, 1992, OSWER Directive 9355.7-03.

25. Procedure for Planning and Implementing Off-Site Response Actions, Federal Register, Volume 50, Number 214, November 1985, pages 45933-45937.

26. Land Use in the CERCLA Remedy Selection Process, May 1995, OSWER Directive No. 9355.7-04.

27. Reuse Assessments: A Tool to Implement the Superfund Land Use Directives, June 4, 2001, OSWER Directive No. 9355.7-06P.

28. Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites, April 2008, OSWER EPA 542-R-08-002.

Table 1

Summary of Deliverables
Pacific Coast Pipeline Superfund Site

TASK	DELIVERABLE	NO. of COPIES	DUE DATE
3.2	HASP Letter	1	30 days after UAO date
4	Quarterly Groundwater Monitoring Report	2	45 days after end of quarter
5	Quarterly Status Report	2 (E)	20 days after end of quarter
11	Reuse Assessment Memo	2	September 30, 2009
12	Remedial Action Objectives Technical Memo	2	30 days after receipt of ARARs, but no earlier than September 30, 2009
13	Draft Remedial Investigation/Feasibility Study (RI/FS) Report	3	60 days after receipt of EPA comments on Phase 3 Report, but no earlier than November 24, 2009
13	Final RI/FS Report	2	45 days after receipt of EPA comments on draft RI/FS Report

(E) – Electronic submittal only

Number of copies includes copy for DTSC

Table 2

Groundwater Monitoring Schedule Matrix

Well	First Quarter	Second Quarter		Third Quarter	Fourth Quarter		
	Quarterly Parameters	Quarterly Parameters	Semi-annual Parameters	Quarterly Parameters	Quarterly Parameters	Semi-annual Parameters	Annual Parameters
MW-1S		☑	☑		☑	☑	
MW-2S		☑	☑		☑	☑	
MW-3S		☑	☑		☑	☑	
MW-6S	☑	☑	☑	☑	☑	☑	☑
MW-8S		☑	☑		☑	☑	
MW-9S		☑	☑		☑	☑	
MW-11S		☑	☑		☑	☑	
MW-14S		☑	☑		☑	☑	
MW-17S		☑	☑		☑	☑	
MW-18S		☑	☑		☑	☑	
MW-19S		☑	☑		☑	☑	
MW-20S		☑	☑		☑	☑	
MW-25S		☑	☑		☑	☑	
MW-28S		☑	☑		☑	☑	
MW-29S		☑	☑		☑	☑	
MW-30S		☑	☑		☑	☑	
MW-35S	☑	☑	☑	☑	☑	☑	
MW-37S		☑	☑		☑	☑	
MW-38S		☑	☑		☑	☑	
MW-39S	☑	☑	☑	☑	☑	☑	☑
MW-40S		☑	☑		☑	☑	
MW-41S	☑	☑	☑	☑	☑	☑	
MW-42S	☑	☑	☑	☑	☑	☑	☑
MW-43S		☑	☑		☑	☑	
MW-44S	☑	☑	☑	☑	☑	☑	
MW-45S	☑	☑	☑	☑	☑	☑	☑
MW-48S	☑	☑	☑	☑	☑	☑	
MW-49S	☑	☑	☑	☑	☑	☑	
MW-50S	☑	☑	☑	☑	☑	☑	☑
EW-P2	☑	☑	☑	☑	☑	☑	
EW-1	☑	☑	☑	☑	☑	☑	
EW-2		☑	☑		☑	☑	
EW-4	☑	☑	☑	☑	☑	☑	
EW-5	☑	☑	☑	☑	☑	☑	

Quarterly Parameters include: total petroleum hydrocarbons as gasoline (TPHG) by EPA Method 8015M; benzene, toluene, ethyl benzene, and xylenes (BTEX) by EPA Method 8021B; dissolved oxygen (DO), oxidation reduction potential (ORP), pH, conductivity, and temperature by field measurement.

Semi-annual Parameters include: sulfate by EPA Method 300.

Annual Parameters include: BTEX, methylene chloride, 1,2-dichloroethane (1,2-DCA) by EPA Method 8260B.