

1 VIVIANA L. HEGER (State Bar No. 205051)  
2 **TROPIO & MORLAN**  
21700 Oxnard Street, Ste. 1700  
3 Woodland Hills, CA 91367  
Telephone: (818) 883-4000, ext. 126  
4 Cell: (213) 446-0384  
Facsimile: (818) 883-4242  
5 vheger@tropiolaw.com

6 DEBORAH PERFETTI FELT (State Bar No. 89230)  
**TESORO REFINING & MARKETING COMPANY LLC**  
2350 E. 223rd Street, 416D  
7 Carson, CA 90810  
Telephone: 310-847-3929  
8 Cell: 626-712-3265  
Facsimile: 310-847-5744  
9 deborah.p.felt@tsocorp.com

10 Attorneys for Petitioners  
11 **TESORO REFINING & MARKETING COMPANY LLC**  
**TESORO SOCIAL PIPELINE COMPANY LLC**

12 **STATE OF CALIFORNIA**

13 **WATER RESOURCES CONTROL BOARD**

14  
15 In the Matter of Los Angeles Regional Water  
16 Quality Control Board 13304 and 13267 Order –  
Former BP/ARCO Pipelines, Golden Avenue  
17 Between Baker Street and West Wardlow Road,  
Long Beach, California; The Petition of

18 TESORO REFINING & MARKETING  
19 COMPANY LLC and TESORO SOCIAL  
PIPELINE COMPANY

20  
21 Petitioners  
22

SWRCB FILE NO. \_\_\_\_\_

**VERIFIED PETITION FOR REVIEW AND  
REQUEST FOR HEARING; REQUEST  
FOR STAY AND SUPPORTING  
DECLARATION**

23 **INTRODUCTION**

24 Pursuant to California Water Code sections 13267 and 13304 and California Code of  
25 Regulations (“CCR”) Title 23, sections 2050 *et seq.*, Tesoro Refining & Marketing Company LLC  
26 and Tesoro SoCal Pipeline Company LLC (“Petitioners”)<sup>1</sup> respectfully petition the State Water  
27

28 <sup>1</sup> On August 8, 2012, Tesoro Refining & Marketing Company LLC (“TRMC”) and BP West Coast Products  
LLC, Atlantic Richfield Company, and ARCO Terminal Services Corporation (collectively “BP”) entered into a  
Purchase and Sale Agreement (the “PSA”) whereby TRMC agreed to purchase certain assets from BP and agreed to



1 Resources Control Board (“State Board”) for review of an order under Water Code sections 13267  
2 and 13304 (the “Order”) dated September 18, 2014 and issued to Petitioners’ predecessors BP  
3 Pipelines (North America), Inc., Atlantic Richfield Company, and ARCO Terminal Services  
4 Corporation by the Executive Officer of the Los Angeles Regional Water Quality Control Board  
5 (“Regional Board” or “Board”).

6 A copy of the Order is attached hereto as Exhibit 1. The Regional Board issued a tentative  
7 clean-up and abatement order on April 26, 2013. Comments to the tentative Order are attached as  
8 Exhibit 2.

9 The Order pertains to Golden Avenue between Baker Street and West Wardlow Road, Long  
10 Beach, California (“Site”) and alleges that Petitioners’ pipelines are a “gasoline source” responsible  
11 for a discharge of “wastes, including volatile organic compounds (VOCs), particularly benzene and  
12 1,2-dichloroethane (1,2-DCA), light non-aqueous phase liquids (LNAPL), and other waste  
13 constitutes of concern to the environment.” Order at ¶¶1(b), 7(f). The Site overlaps a benzene and  
14 oil waste clean-up site, No. SL2044M1596, under the control of Oil Operators Inc. (“OOI”) (“OOI  
15 Site”). OOI operated a former wastewater and oil recovery plant where it processed millions of  
16 gallons per day of benzene-containing waste, wastewater, and tank bottoms from approximately  
17 1926 to 1998 at 712 Baker Street. Eighteen other pipelines are within or near the Site. The Order  
18 does not name OOI or other pipeline operators. Diagrams of the Site and some nearby structures are  
19 attached as Exhibit 3.

20 Petitioners seek review of the Order because (a) pipeline records, Site data, and technical  
21 evaluation do not support the Board’s basis that the pipelines are the source of the alleged wastes;  
22 (b) the Site at issue overlaps the OOI Site that is a likely source of the wastes; (c) the Order’s  
23 demand for an “uninterrupted” vapor extraction system (“VES”) is based on potential risk to nearby  
24 residents that is not accurately stated; (d) the overall basis of the Order is inconsistently applied in  
25 that other similarly situated parties are excluded from the Order; and (e) the Order lacks a factual  
26

---

27 undertake certain responsibilities for environmental investigation and remediation. Effective June 1, 2013, TRMC and  
28 Tesoro SoCal Pipelines LLC assumed investigation and remediation responsibilities of the above-named entities at the  
Site. Tesoro SoCal Pipeline Company LLC is the owner of Lines 32 and 34. TRMC owns Line 252.

1 and legal basis, or departs from legal precedents, for the reasons described in Petitioners' Points and  
2 Authorities.

3 Prior to the Order, Petitioners' predecessors undertook extensive research and analysis about  
4 the Site pursuant to a May 11, 2012 order issued under Water Code section 13267.<sup>2</sup> Among other  
5 things, Petitioners' predecessors submitted a work plan with research results on July 11, 2012  
6 (attached as Exhibit 4), another work plan on September 12, 2012, and extensive comments in a  
7 December 4, 2012 letter (attached as Exhibit 5). The Regional Board rejected the work plans;  
8 therefore, the parties agreed following a December 5, 2012 meeting that Petitioners' predecessors  
9 would wait for the Board to respond to the data submitted before responding further to the May 11,  
10 2012 investigative order under Water Code section 13267.<sup>3</sup> Rather than responding to the data  
11 presented in December 2012, the Board issued the tentative, then final, Order.

12 **a. Petitioners' Pipelines are Not a Gasoline Source**

13 The Order alleges that Petitioners' Pipelines 32, 34, and 252 ("Lines 32, 34, and 252") are a  
14 gasoline source at the Site; however, the lines are not a likely gasoline source because Lines 32 and  
15 34 did not carry gasoline and Line 252 only carried gasoline prior to 1953. Any pre-1953 gasoline  
16 release would have likely degraded within the past 60 years (particularly in the absence of gasoline  
17 free product trapped in lower permeability soil layers along Golden Avenue, which has not been  
18 identified in extensive prior investigations).<sup>4</sup> Section 13304 applies only to post-1970 releases or  
19 effects; therefore, a pre-1953 release is outside the scope of the statute where, as here, there is no  
20 credible evidence of the effects of such a historical release. Even if Lines 32, 34, and 252 were  
21

22 \_\_\_\_\_  
23 <sup>2</sup> Petitioners' predecessors sought timely review of that order in Case No. SWRCB/OOC File A-2215.

24 <sup>3</sup> The parties memorialized this understanding in a December 7, 2012 letter from counsel for Petitioners'  
25 predecessor to Regional Board counsel.

26 <sup>4</sup> McHugh, Thomas E., et al., Prepublication Draft, "American Petroleum Institute Technical Bulletin #25:  
27 Remediation Progress at California LUFT Sites: Insights from the GeoTracker Database." Further, the California Low  
28 Threat Closure Policy (St. Water Res. Control Board Res. No. 2012-0016) provides that "petroleum fuels naturally  
attenuate in the environment through adsorption, dispersion, dilution, volatilization, and biological degradation. This  
natural attenuation slows and limits the migration of dissolved petroleum plumes in groundwater." See Brycon, "Report  
on Additional Site Characterization, Oil Operators, Inc., 712 Baker Street, Long Beach, Cal., SCP Case No., 0093,  
SCPID No. 2044M00," prepared for Oil Operators, Inc. (September 30, 2011, Newport Beach, Cal.).

1 gasoline lines *after* 1953, which they were not, there is no evidence that they leaked and caused  
2 benzene, 1,2-DCA and LNAPL at the Site.

3 **b. The Site Overlaps Eastern Edge of Site No. SL2044M1596, the Likely Source of Wastes**

4 A likely source of wastes at the Site is the OOI Site. OOI is not named in the Order despite  
5 its documented history of using, mishandling, and discharging “waste” as defined in the Order, as  
6 documented by permit violations, notices of violation, illegal dumping, and poor site controls.<sup>5</sup> OOI  
7 processed benzene-containing waste through unlined facility basins (some of which may have been  
8 lined later in the period of use), in sumps (*i.e.*, rectangular concrete structures of currently  
9 undetermined construction and use, which traverse the eastern portion of the OOI Site, *see* Exh.3) or  
10 other equipment<sup>6</sup> (located as close as approximately 70 feet from Petitioners’ pipelines). OOI  
11 discharged historically to the Los Angeles River and later to the Sanitation District vitrified clay  
12 sewer line, which traverses the eastern side of the OOI Site. *See* Exh. 3.

13 Between 1990 and 1996, the OOI wastewater lines entering OOI property at either end of  
14 Golden Avenue ruptured off site due to corrosion, at least three times, causing releases of hot brine  
15 water, crude, wastewater, and sludge into the environment.<sup>7</sup> One release in 1996 occurred at the  
16 corner of Golden Avenue and Baker Street. The other two documented releases were farther from  
17 the Site and may not have directly contributed impacts; however, they further demonstrate that OOI  
18 had a corroded wastewater line (*i.e.*, the influent line carrying brine, refinery waste, etc., to the OOI  
19 Site), which may have ruptured or leaked at other places that suffered corrosion. Analytical data  
20 from the 1990 release detected 2,010 parts per billion (ppb) benzene in the brine water. These  
21 documented releases from the OOI Site are a more probable source of waste, as compared to  
22 Petitioners’ pipelines that have no record of releases at the Site. Water Code section 13267(e)

23  
24 <sup>5</sup> *See* Exh. 2, May 28, 2013 Letter, at 2-3.

25 <sup>6</sup> Little documentation is available with regard to the configuration and operation of the sumps. AECOM  
26 personal communication with the Long Beach Department of Health and Human Services (Carmen Piro) on May 15,  
2014 indicated the sumps were used to discharge waste.

27 <sup>7</sup> Long Beach Department of Health and Human Services, 1990, Hazardous Materials Emergency Response  
28 Incident Report Feb. 20, 1990 (LBDHHS, 1991); Official Inspection Report, August 23, 1991; 1996 Press-Telegram.  
Pages A1 and A5, July 2.

1 anticipates that the Regional Board would give greater weight to documented releases from the OOI  
2 Site, as evidence, as opposed to suspected releases from Lines 32, 34, and 252. Indeed, the OOI  
3 wastewater lines are located along the eastern boundary of the OOI Site where groundwater impacts  
4 exist.<sup>8</sup>

5 The OOI facility accepted oil field brine and production waters, oil, refinery waste, drilling  
6 mud and cuttings, and tank bottoms.<sup>9</sup> Oil production waste,<sup>10</sup> tank bottoms, and brine, in particular,  
7 are known to have high benzene content.<sup>11</sup> Oil production waste was accepted from at least 37  
8 member oil companies in the Signal Hill-Long Beach area, including major companies such as  
9 Texaco, Sun, Humble, Superior, and Signal.<sup>12</sup> OOI's wastes have been documented to contain 5,110  
10 ppb benzene.<sup>13</sup> Despite routine handling of high-benzene containing waste for decades, OOI rarely  
11 if ever sampled for benzene. Despite extensive searches of publicly available information, Petitioner  
12 has identified only limited records of OOI wastewater influent and effluent sampling for benzene  
13 and no records of 1,2-DCA during its environmental investigation and clean-up efforts since the  
14 1970s. Petitioner has also identified only limited records of OOI's historical operations at its

---

15  
16 <sup>8</sup> See City of Long Beach Sewer Maps. See e.g., Brycon, "Report on Additional Site Characterization, Oil  
17 Operators, Inc., 712 Baker Street, Long Beach, Cal., SCP Case No., 0093, SCPID No. 2044M00," Prepared for Oil  
Operators, Inc. (September 30, 2011, Newport Beach, Cal.).

18 <sup>9</sup> A.M Piper, A.A.Garrett, et al., U.S. Department of the Interior, Geologic Survey, "Native and Contaminated  
19 Ground Waters in the Long Beach Santa Ana Area, California, "Geological Survey Water-Supply Paper 1136 (1953).  
The Oil and Gas Journal at 58-59 (Sept. 11, 1972). Jaykim, "Workplan to Install Two Additional Groundwater  
20 Monitoring Wells at Oil Operators North Site." (August 4, 1988, Los Alamitos, Cal).

21 <sup>10</sup> Water generated during recovery of petroleum contains large amounts of various hazardous organic  
22 compounds. "[Benzene, toluene, ethylbenzene, and xylenes ("BTEX")] aromatic hydrocarbons are the primary volatile  
23 liquid hydrocarbons dissolved in the brine due to their high solubility in water." See "Dissolved Benzene Content of  
24 Subsurface Brines as a Proximity Indicator for Petroleum Deposits," Exploration Technologies, Inc. 2002 (available at:  
25 <http://eti-geochemistry.com/brine/index.html>). According to the U.S. EPA, "a significant percentage of tank bottoms  
26 [associated with produced water from oil well drilling] samples exhibit one or more hazardous characteristics. Benzene,  
27 a common component of hydrocarbons, appears to be the most prevalent toxic constituent, with lead also showing  
28 elevated concentrations in some cases." See U.S. EPA "Associated Waste Report: Crude Oil Tank Bottoms and Oily  
Debris" (January 2000, Washington D.C.).

<sup>11</sup> As oil accumulates, part of the more soluble hydrocarbons diffuse into the aquifer away from the  
accumulation. See John Hunt, Petroleum Geochemistry and Geology (Freeman & Company, San Francisco 1979).

<sup>12</sup> The Oil and Gas Journal, 1972, "California project, turning sump to soil" at 58-59 (Sept. 11, 1972).

<sup>13</sup> Jack K. Bryant and Associates, Inc., "Investigation of Origination of Groundwater/Soil Contamination at the  
Oil Operators South Site, 712 Baker Street, Long Beach, California," (August 11, 1992, Torrance, Cal.) ("JKBA, 1992").

1 property. Yet, the limited information obtained by Petitioner consistently points to the OOI Site as a  
2 source of waste in the area of the Site.

3 Records also confirm 1,2-DCA has been detected in soil, soil vapor, and groundwater at the  
4 OOI Site.<sup>14</sup> Materials like petrochemical waste and cleaning solvents contain 1,2-DCA,<sup>15</sup> and  
5 records indicate the OOI accepted refinery waste. This contradicts the assertion in the Order that  
6 Petitioners' pipelines are the *only* source of gasoline (and 1,2-DCA in leaded gasoline). *See* Exh. 1,  
7 Order at ¶7(g). A report of a waste source evaluation conducted on behalf of OOI in 1992 concluded  
8 that "1,2 Dichloroethane appears to be caused by a combination of 1) Contaminant inflow via the  
9 brine pipeline, and 2) Contaminant infiltration via the settling ponds."<sup>16</sup>

10 The OOI Site's remediation efforts history is too lengthy and complicated to recount here.  
11 One incident of note, however, is OOI's resolution of a pending criminal action, in which it entered  
12 into a consent decree in 2002 to remediate one or more storage basins that had caused a condition of  
13 nuisance to the neighboring community.<sup>17</sup>

14 The Wrigley Heights residences are located adjacent to the OOI Site east of Golden Avenue.  
15 In or around April 2012, OOI began installing a soil vapor extraction system (VES) on its property  
16 to "to mitigate the benzene soil vapor plume, present beneath the northern portions of the OOI site,  
17 beneath portions of Golden Avenue and beneath some residential homes on the east side of Golden  
18 Avenue." *See* May 11, 2012 Order under Water Code 13267 to Petitioners' predecessors. Forensics  
19 analysis shows that the benzene beneath Petitioners' pipelines matches precisely with the vapor on  
20 the OOI Site adjacent to Golden Avenue and the northern portion of the OOI Site north of Baker  
21

22  
23 <sup>14</sup> Along with benzene, 1,2-DCA exists in OOI Site ground water at several wells, in deeper soil at B14 and  
24 ESE-MW1, and soil vapor at locations CESV10, CESV15, CESV19, CESV30 and CESV33. *See* Exh. 5, Dec. 4, 2012  
Letter, at 10.

25 <sup>15</sup> U.S. EPA, "Technical Fact Sheet On: 1,2-Dichloroethane." *See also* Agency for Toxic Substances and  
26 Disease Registry, 1-2 Dichloroethane Fact Sheet, September 2001.

27 <sup>16</sup> JKBA, 1992

28 <sup>17</sup> *People v. Oil Operators Inc.*, Case No. 01LM01702 Consent Decree (Long Beach Municipal Court, August  
28, 2002).

1 Street. This suggests a source at the OOI Site. *See* Exh. 5 at 10-11. Despite this evidence, the Order  
2 now shifts the responsibility for VES mitigation to Petitioners when credible evidence points to OOI.

3 **c. The Order's Demand for VES**

4 The Order tasks Petitioners to undertake an Interim Remedial Action Plan ("IRAP") to  
5 accomplish "uninterrupted soil vapor intrusion mitigation." Petitioners' predecessors understood  
6 from the Regional Board that this meant taking over OOI's VES or starting a new VES almost  
7 immediately. This demand is unreasonable because it shifts entirely to Petitioners a duty that  
8 belongs to OOI. The demand for an IRAP also lacks a reasonable basis.

9 The Order alleges that Petitioners' predecessors "have caused or permitted waste, including  
10 VOCs, particularly benzene, to be discharged or deposited where the wastes pose, or may pose, a  
11 human health threat to occupants of the nearby Wrigley Heights residents through *direct contact*  
12 *exposure to contaminated soil and/or groundwater ...*" *See* Exh. 1, Order at ¶21 (emphasis added).  
13 There is no health risk assessment or other data to support the affirmative statement that the wastes  
14 do or may pose a risk through "direct contact exposure." This statement is potentially misleading to  
15 the residents of the neighborhood and contradicts the Regional Board's statement that the Site raises  
16 "a *potential* human health threat" that requires a health risk assessment to "consider all *possible*  
17 pathways for exposure." *See* Exh. 1 at Resp. to Comment No. 1.21 (emphasis added).

18 The VES that the Order anticipates is designed to address the benzene that the OOI VES was  
19 to remove. Nonetheless, there is no evidence that suggests residents face a risk of direct exposure to  
20 subsurface groundwater or soil from Lines 32, 34, and 252. The Order should not require Petitioners  
21 to explore all potential pathways along the eastern edge of the OOI Site. The responsibility rightly  
22 belongs to OOI; credible evidence shows a precise forensics match between the benzene at the OOI  
23 Site and near the Wrigley neighborhood.

24 **d. Basis of the Order is Inconsistently Applied**

25 The overall basis of the Order is inconsistently applied in that other similarly situated parties  
26 are excluded or not treated similarly. There are primarily two areas of concern ("AOCs") identified  
27 by the Order at the Site. AOC A is at the northern end of Golden Avenue and AOC B at the  
28 southern end. Approximately 14 pipelines are located within or near AOC A and about nine

1 pipelines are located within or near AOC B, for a total of 18 pipelines (five of which are near both  
 2 AOCs A and B). See Exh. 3 and Exh. 5. Specifically, these are the 18 nearby pipelines:

Line	Where	Relevant to:
1	An abandoned 8-inch Golden Eagle pipeline	Baker St and Golden Ave AOC A and AOC B, Golden Ave
2	A 6-inch Golden Eagle line	Baker St and Golden Ave AOC A and AOC B, Golden Ave
3	An 8-inch Getty pipeline	Baker St and North OOI AOC A
4	An abandoned 8-inch Getty pipeline	Baker St AOC A
5	A 10-inch Union Oil line	Baker St and North OOI AOC A
6	An abandoned 6-inch Union Oil line	Baker St AOC A
7	An abandoned 4-inch General Exploration line	Baker St AOC A
8-9	Two 12-inch OOI wastewater pipelines crossing Baker Street between the north OOI and the south OOI properties,	crossing Baker St AOC A (conduit between north and south OOI)
10-11	Two 12-inch OOI wastewater pipelines entering south OOI from its northeast corner and running to the former clarifiers	Baker St and north and south OOI property AOC A
12	A 24-inch OOI wastewater pipeline, traversing southeast corner of OOI from Golden Avenue to east side of Basin 1	southeast Golden Ave and OOI Basins AOC B, eastern side of OOI, southeast Golden Ave
13	A 24-inch OOI "storm" pipe traversing the southwestern portion of OOI, south of Basin 2, toward sump	southwestern OOI toward Golden Ave AOC B
14	A 30-inch vitrified clay pipe (VCP) Los Angeles County Sewer line reportedly used by OOI to discharge waste	Along Golden Avenue, traversing the eastern side of the OOI property. AOC A and AOC B, Golden Ave
15	A storm water pipeline	southeast OOI and Golden Ave AOC B (potential conduit)
16	A 30-inch water line	Baker St and Golden Ave AOC A and AOC B (potential conduit)
17	An 30-inch abandoned water pipeline	Baker St and Golden Ave AOC A and AOC B (potential conduit)
18	A 6- to 8-inch VCP sewer pipeline	southeast Golden Ave AOC B (potential conduit)

27 Worth noting are the four 12-inch and the two 24-inch OOI wastewater or storm water lines.  
 28 The potential flow through these six large-diameter lines is significant compared with Petitioners' six-inch, eight-inch, and 12-inch lines. Indeed, in 1993, OOI was discharging approximately 1.1

1 million gallons per day (MGD) of wastewater to the Los Angeles County sewer line under Permit  
2 No. 9036. Analytical data associated with the OOI 1993 Self-Monitoring Report show BTEX in the  
3 effluent from the OOI Site.<sup>18</sup> The VCP sewer line that traverses the eastern side of the OOI Site was  
4 constructed by the 1950s. Typical pipe and joint design for VCP prior to the 1960s placed excessive  
5 pressure on the pipe, often resulting in significant pipe leaks.<sup>19</sup> Exfiltration (*e.g.*, leakage from  
6 joints, pipe cracks, etc.) rates for VCP lines in California can exceed 50 percent of flow.<sup>20</sup> Also,  
7 Petitioners' understanding is that the OOI lines were not as highly regulated for leak integrity as  
8 Petitioners'.

9 The Regional Board believes "pipeline contents, especially in refined product lines,  
10 commonly change[.]" *See* CAO Response to Comment No. 1.2. Nonetheless, the Regional Board  
11 has imposed the Order only upon Petitioners, taking inconsistent positions with regard to the 18  
12 pipelines within and near AOCs A and B and Lines 32, 34, and 252. Petitioners and their  
13 predecessors have provided extensive information to the Regional Board about their pipelines but  
14 have not discovered through Public Record Act requests that other similarly situated pipelines have  
15 done the same, with the exception of Plains.

16 Similar inconsistencies exist with regard to data related to tracking contaminants to  
17 groundwater. For example, the Board evaluated hydrocarbon impacts on the OOI property north of  
18 Baker Street and concluded that such impacts lacked a "track to groundwater" and, therefore, were  
19 coming instead from the pipelines along Golden Avenue (not the pipelines on Baker, which are  
20 closer geographically). *See* Exh. 1, Order, at Resp. to Comment No. 1.17. Along Golden Avenue,  
21 however, data show no "track to groundwater" either, as Petitioners' predecessor pointed out to the  
22 Board with extensive data. *See* Exh. 5. The lack of data tracking contaminants to groundwater was  
23 used to omit OOI from the Order whereas the lack of the same type of data along Golden Avenue  
24

---

25 <sup>18</sup> Long Beach Department of Health and Human Services records, OOI Self-Monitoring Report and associated  
26 analytical report (1993).

27 <sup>19</sup> *e.g.*, Michael Fielding, "The return of vitrified clay pipe," *Public Works Magazine*, March 11, 2011.

28 <sup>20</sup> U.S. EPA, Robert S. Amick, P.E., et al., "Exfiltration in Sewer Systems," EPA/600/R-01-034 (December  
2000).

1 was disregarded as a basis to omit Petitioners in the Order. This inconsistency treats similarly  
2 situated parties differently, contrary to water quality enforcement policy. If data on a “track to  
3 groundwater” is relevant – which it is – it is relevant both at the OOI Site and the Site.

4 The Board attempts to escape this inconsistency by contending that at the Site (and only at  
5 the Site, apparently) an older near-surface release occurred, but the center of the mass migrated  
6 down such that the near-surface impacts vanished substantially or entirely. To illustrate, the  
7 pipelines exist at about five feet below ground level, and maximum benzene vapor impacts in AOC  
8 A were detected approximately 20 feet below ground level. The Board appears to believe that a  
9 mechanism existed at the Site that degraded soil impacts completely between about five and 20 feet;  
10 however, the Order does not explain what this mechanism is, how it worked, and why it would exist  
11 only at the Site and not the OOI Site. The Board speculates about the mechanism that would  
12 transport waste from a pipeline, but does not consider how a similar mechanism might have  
13 transported waste from sludge that accumulated in OOI’s unlined basins or sumps. The Board’s  
14 dismissal of OOI as a source is particularly inappropriate when forensic analysis of hydrocarbon  
15 vapor from AOC A is considered; this evaluation found no evidence of gasoline or refined product.

16 These inconsistencies are contrary to state policy and support Petitioners’ request for  
17 rescission of the Order or, at least, a modification as further described in this petition.

18 **1. NAME AND ADDRESS OF PETITIONERS**

19 Petitioners may be contacted through their counsel of record: Viviana L. Heger, Tropio &  
20 Morlan, 21700 Oxnard Street, Los Angeles, California 91367 and Deborah P. Felt, Tesoro  
21 Companies Inc., 2350 E. 223rd Street, 416D, Carson, California 90810.

22 **2. THE ACTION OR INACTION FOR WHICH PETITIONERS SEEKS REVIEW**

23 This petition for review concerns the issuance of the Regional Board’s Order, entitled  
24 “Cleanup and Abatement Order No. R4-2013-0064 Pursuant to California Water Code Sections  
25 13267 and 13304,” dated September 18, 2014. The Order defines the Site involved broadly as  
26 “Golden Avenue between Baker Street and West Wardlow Road, Long Beach, California 91750  
27 (SCP Case No. 0093A and Site ID No. 2040420).” The Site is the eastern boundary of the OOI Site,  
28 which has been undergoing environmental investigations and activities since about the 1970s. OOI

1 has left gaps in its assessment of the OOI Site; therefore, the Order essentially shifts to Petitioners  
2 the burden to fill in the gaps in the work related to the eastern boundary of the OOI Site. The  
3 Regional Board has repeatedly acknowledged the “unknown” extent of impacts along the eastern  
4 border of the OOI Site, stating:

- 5 • The “Regional Board agrees that there is a lack of data defining an eastern boundary  
6 for impacts, particularly in soil and groundwater (as opposed to soil gas)[.]”
- 7 • The “extent of ground water impacts within Golden Avenue and north of it remains  
8 unknown[.]”
- 9 • “The extent of impacts along Golden Avenue has not been defined laterally or  
10 vertically. The investigation of impacts has not been fully completed.”
- 11 • The Site is “largely undefined[;]” (*see* Exh. 1 at Response to Comment Nos. 1.6,  
12 1.11, 1.18, 1.22.)

13 Petitioners were named in the Order because the Regional Board believes that Lines 32, 34,  
14 or 252 carried gasoline that spilled and caused benzene, 1,2-DCA and LNAPL at the Site. Lines 32,  
15 34, and 252, however, did not carry gasoline – except Line 252 prior to 1953. Even if they did carry  
16 gasoline, however, there are no records of gasoline releases from the lines at the Site. As explained  
17 further below, in Exhibit 2, and the Points and Authorities attached hereto, Lines 32, 34, and 252 are  
18 not known to have discharged any waste or contributed in any manner to benzene, 1,2-DCA and  
19 LNAPL at the Site.

20 The Order fails to describe an evidentiary basis for naming Petitioners as dischargers, except  
21 for the Board’s assertion that “pipeline contents, especially in refined product lines, commonly  
22 change” and that “[j]ust because BP [Petitioners’ predecessor] has no record of gasoline pipeline  
23 leaks . . . does not mean that a releases did not occur. A release can occur even if there is no record  
24 of it.” *See* Exh. 1, Order, at Resp. to Comment No. 1.2. If this is the basis for naming Petitioners,  
25 then the Regional Board is essentially asking Petitioners to prove their innocence. Indeed, the  
26 Regional Board has said just that:

27 //

28 //

1 To date, BP [Petitioners' predecessor] has not provided the Regional Board with  
2 evidence that the pipelines are not the source of the wastes at the site or that other  
3 entities are the source. See Exh. 1 at Response to Comment No. 1.2.

4 Petitioners know of no regulatory or statutory requirement that allows the Regional Board to  
5 presume they are discharges unless they can provide "evidence that the pipelines are not the source  
6 of the wastes[.]"

7 The Order names only Petitioners as responsible parties, despite that the OOI Site clean-up  
8 efforts overlap the entire Site and include OOI pipelines with known, documented releases that cross  
9 Golden Avenue and are within or near AOCs A and B. Disregarding OOI's own pipelines, the  
10 Regional Board believes Petitioners are the only responsible parties because of "the distribution of  
11 impacts along the eastern edge of the OOI property, which is adjacent to Lines 32, 34, and 252 in  
12 Golden Avenue." *Id.* at Resp. to Comment 1.18. While these impacts exist, they are primarily at a  
13 deeper level. Petitioners, therefore, believe their pipelines are located above contamination from the  
14 OOI Site because, among other things, the contamination occurs at too deep a level to have arisen  
15 from the Lines 32, 34, or 252. Both Petitioners and their expert consultants have evaluated the Site  
16 data and information extensively and provided ample evidence to substantiate Lines 32, 34, or 252  
17 are not sources of the benzene, 1,2-DCA or LNAPL along the eastern edge of the OOI Site.

18 The Order alleges gasoline is the source of benzene at the eastern edge of the OOI Site; but,  
19 if so, it did not originate from Lines 32, 34, or 252. First, records show that Line 252 was the only  
20 line that transported gasoline but only prior to 1953. Petitioners have no record of a leak from this  
21 six-inch line, and if a leak had occurred it would have likely degraded over 60 years, in the absence  
22 of gasoline free product.<sup>21</sup> California Water Code section 13304 applies only to post-1970 releases  
23 or effects; therefore, a pre-1953 release is outside the scope of the statute where, as here, there is no  
24 credible evidence of the effects of such a historical release. Line 252, therefore, should be removed  
25 from the Order.

26 //

27 //

28 <sup>21</sup> Line 252 was also used for wastewater, but the Order does not specify, nor do Petitioners' records show, how  
wastewater use of Line 252 could be a viable "gasoline source" responsible for 1,2-DCA, benzene, or LNAPL.

1           Second, Line 32 is not a source of gasoline. This 12-inch line was used to transport crude oil  
2 and dark refined product. The Regional Board appears to agree; Exhibit B of the Order does not  
3 attribute Line 32 to gasoline service at any time, stating expressly that Line 32 was “[n]ot for  
4 gasoline.” Line 32 should be removed from the Order because it did not carry gasoline. The line  
5 also tested tight in 2004 before it was taken out of service and again in 2011 before it was placed  
6 into service. *See* Exh. 4.

7           Third, Line 34 is not a source of gasoline. This eight-inch line is a diesel and refined  
8 products line. Exhibit B of the Order attributes Line 34 to gasoline service, contrary to Petitioners’  
9 records; however, the only refined product Line 34 transported was diesel. Even if Line 34 carried  
10 gasoline – which it did not – the line passed hydrotests in 1990, 1992, 1994, 1997, 1998, 2004, 2007,  
11 and most recently in 2010.<sup>22</sup> Line 34 should be removed from the Order because it also did not carry  
12 gasoline, and, even if it did, ample records show the line repeatedly tested tight. *Id.*

13           To verify no gasoline source, Petitioners’ predecessors undertook an extensive fingerprinting  
14 analysis of the AOC areas. Evidence of a gasoline release at the Site is not reflected anywhere  
15 within the analysis, which it would be if gasoline were present. Thus, the “fingerprint” of the  
16 subsurface hydrocarbon vapors does not match gasoline at all. The analysis identifies no gasoline  
17 whatsoever in the subsurface hydrocarbon vapors. In AOC A, not only is subsurface vapor not  
18 sourced from gasoline, it instead matches precisely with the vapor on the OOI Site adjacent to  
19 Golden Avenue and the northern portion of the OOI Site north of Baker Street. This suggests a  
20 source at the OOI Site exists at AOC A. Forensic analysis also found that the LNAPL near AOC B  
21 was not sourced from gasoline. Recent investigations show that the chromatogram of the LNAPL  
22 sample indicates the product appears to be dominated by a kerosene range product (*e.g.*, Stoddard  
23 solvent) with the presence of lead, but as a minor component.<sup>23</sup> *See also* Exh. 5, Dec. 4, 2012  
24 Letter, at 11-14.

25  
26           <sup>22</sup> The July 11, 2012 cover letter to the July 11, 2012 proposed work plan reflects that Line 34 passed leak  
27 integrity tests in 1990, 1992, 1994, 1997, 1998, 2004, 2007, and 2010. *See* Exh. 4.

28           <sup>23</sup> This data was shared with the Regional Board in November 26, 2013 letter regarding split sampling  
conducted by Petitioners and OOI.

1 As non-gasoline lines, Lines 32 and 34 are not likely sources of 1,2-DCA or LNAPL. The  
2 lines did not carry products responsible for 1,2-DCA. These lines carried diesel, crude oil and dark  
3 refinery products, and 1,2-DCA is not a component of these products. Petitioners also have no  
4 information that LNAPL at the Site arises from Lines 32, 34, or 252.

5 **3. THE DATE REGIONAL BOARD ACTED OR FAILED TO ACT**

6 The date of the Regional Board's action that is subject to review is September 18, 2014,  
7 when the Order was signed by the Executive Officer of the Regional Board. The Order was received  
8 at 9:04 p.m. via e-mail transmission.

9 **4. STATEMENT OF REASONS THE ACTION IS INAPPROPRIATE AND IMPROPER**

10 The issuance of the Order was beyond the authority of the Regional Board, inappropriate,  
11 improper, or not supported by the record, for the following reasons:

12 a) The Order is unreasonable in that it seeks to impose burdensome and  
13 unreasonable obligations, including, without limitation, assessments, work plans, remediation, and  
14 continued investigation and studies, which are not authorized under the Water Code. A clean-up and  
15 abatement order may be issued only to a person "who has caused or permitted, causes or permits, or  
16 threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be,  
17 discharged into the waters of the state and creates, or threatens to create, a condition of pollution of  
18 nuisance." Cal. Water Code § 13304. Water Code Section 13267(b)(1) allows the Regional Board  
19 to issue a Water Code 13267 order to "any person who has discharged, discharges, or is suspected of  
20 having discharged or discharging, or who proposes to discharge waste within its region." Petitioners  
21 have not discharged and are not suspected of having discharged waste at the Site. Neither Water  
22 Code section 13267 nor 13304 authorize the Board to order Petitioners' response simply by virtue of  
23 their operation of pipelines, only one of which transported gasoline (prior to 1953). Further, there is  
24 no substantial evidence of a gasoline release from Lines 32, 34 or 252 at the Site or that if such a  
25 release occurred, it is the source of benzene and other pollutants at the eastern border of the OOI  
26 Site.

27 //

28 //

1           b)       The obligations under the Order are further unreasonable because they are not  
2 supported by, or are inconsistent with, substantial evidence in the record. Available evidence does  
3 not support the inclusion of Lines 32, 34, and 252 in the Order. Investigations of Petitioners and  
4 Petitioners' predecessors have found nothing showing any impact from Lines 32, 34, and 252 at the  
5 Site. *See* Exh. 2, 4, and 5. The Regional Board acted improperly by failing to cite credible,  
6 sufficient evidence that justifies requiring Petitioners to perform the work requested in the Order.  
7 Petitioners are not dischargers or threatened dischargers subject to the requirements of Water Code  
8 sections 13304 or 13267. Accordingly, Petitioners should not be named in the Order or,  
9 alternatively, should be named only as secondary responsible parties.

10           c)       The burden, including costs, of the directives set forth in the Order, including  
11 without limitation, additional data, information and reports, do not bear a reasonable relationship to  
12 the need for said data, information and/or reports, or the benefits to be obtained therefrom, and,  
13 therefore, are contrary to California Water Code sections 13267(b)(1) and 13304. The Site overlaps  
14 the eastern edge of the OOI Site investigation area. As a result, many of the items that the Regional  
15 Board seeks have been, will be, or should be completed in conjunction with on-going investigations  
16 by OOI. The subsurface areas beneath the Site have been, will be, or should be sampled by OOI,  
17 and the additional costs of the IRAP and VES as well as costs for further sampling should be borne  
18 by OOI because it is currently undertaking remediation and assessment activities. Thus, the burden,  
19 costs, and directives set forth in the Order are largely, if not entirely, duplicative of directives for the  
20 OOI Site.

21           d)       The Order is vague and ambiguous, including without limitation, its failure to  
22 provide legally sufficient grounds for requiring Petitioners to engage in additional investigation  
23 activities, complete and submit additional data, information and/or reports. The Order is vague and  
24 ambiguous in the manner that it defines the Site. The Site overlaps with the eastern edge of the OOI  
25 Site and shifts to Petitioners various assessment and remediation activities to fill in gaps OOI's  
26 investigation has left behind. Thus, the Order is broad and unnecessarily burdensome to the extent it  
27 is interpreted to require Petitioners to do anything more than provide existing information  
28 concerning the location and operation of their pipelines.

1                   **5. PETITIONERS ARE AGGRIEVED**

2           Petitioners are aggrieved for the reasons set forth in section 4, above. Petitioners are potentially  
3 subject to substantial regulatory requirements pursuant to an Order that is contrary to law and that  
4 relates to releases of wastes, which others, rather than Petitioners, handled. Even if such costs were  
5 authorized, which they are not, they are largely duplicative of existing studies and not tailored in a  
6 manner that will provide any benefit to regional water quality, the environment or human health.

7                   **6. PETITIONERS' REQUEST TO THE STATE BOARD**

8           Petitioners request that the Order be vacated or amended to remove Petitioners as among the  
9 responsible parties required to comply with its requirements.

10           Alternatively, Petitioners seek a determination from the State Board that the Regional Board's  
11 issuance of the Order, in part, was inappropriate and improper and should be modified so that:

- 12           (i)   OOI, the party subject to, or carrying out, existing remediation and assessment orders  
13           or activities is named as the primarily responsible party under the Order and  
14           Petitioners are named as secondary responsible parties in light of the lack of evidence  
15           of Lines 32, 34, and 252 as a "gasoline source" that leaked;
- 16           (ii)   Petitioners may fully satisfy the terms of the Order by completing a reasonable search  
17           for records and analysis of existing data to demonstrate that Petitioners' pipelines  
18           were not sources of a release to the Site;
- 19           (iii)   The deadlines under the Order be extended by at least 60 days with an option for any  
20           aggrieved party to seek additional time;
- 21           (iv)   The Order is remanded to the Regional Board for issuance of either a consolidated  
22           order or coordinated orders that will clearly define the work left to be done for all  
23           dischargers as "a roadmap[;]" e.g., *In re Union Oil Company of California* (Order  
24           No. WQ 90-2, April 19, 1990), 1990 Cal. ENV LEXIS 23 at \*11-\*12; and
- 25           (v)   That the Order be modified such that Petitioners would be required to undertake  
26           remedial work only if they are found to be responsible for discharges of gasoline from  
27           Lines 32, 34, or 252. *See id.*

28           In addition, Petitioners respectfully request the Board to issue a stay in this matter so that the

1 status quo may be maintained until such time as the State Board has the opportunity to rule on this  
2 matter,

3 **7. STATEMENT OF POINTS & AUTHORITIES**

4 Petitioners' statement of points and authorities is attached.

5 **8. STATEMENT OF TRANSMITTAL OF PETITION TO THE REGIONAL BOARD**

6 A true and correct copy of this petition for review was transmitted to Samuel Unger,  
7 Executive Officer of the Los Angeles Regional Board, on October 20, 2014.

8 **9. SUBSTANTIVE ISSUES RAISED BEFORE THE REGIONAL BOARD**

9 Petitioners have not yet been afforded a meaningful opportunity to be heard on the  
10 substantive issues set forth in the Order. Petitioners diligently responded to requests from the  
11 Regional Board following issuance of the May 11, 2012 13267 Order in this action. Petitioners' key  
12 communications are summarized in its December 4, 2012 and May 28, 2013 comments to the  
13 directives in this matter, which are attached hereto as Exhibit 2 and 5. Pending efforts to resolve  
14 disputed issues with Regional Board staff, Petitioners may be without an adequate remedy unless the  
15 State Board grants this petition for review and a hearing with respect to the issues presented here.

16 **10. REQUEST FOR HEARING**

17 In connection with any hearing in this matter, Petitioners reserve the right to present  
18 additional evidence or testimony to the State Board and will submit to the State Board, if  
19 appropriate, statements regarding evidence pursuant to Code of California Regulations, Title 23,  
20 section 2050(b).

21 DATED: October 20, 2014

VIVIANA L. HEGER  
TROPIC & MORLAN

22  
23 DEBORAH P. FELT  
TESORO REFINING & MARKETING COMPANY LLC

24 

25 Viviana L. Heger

26 Attorneys for Petitioners  
TESORO REFINING & MARKETING COMPANY LLC  
27 TESORO SOCIAL PIPELINE COMPANY LLC  
28



1 **MEMORANDUM OF POINTS AND AUTHORITIES**

2 **I. INTRODUCTION AND SUMMARY**

3 For the reasons stated in the Verified Petition, the Regional Board lacks substantial evidence  
4 to include Petitioners in the order, entitled "Cleanup and Abatement Order No. R4-2013-0064  
5 Pursuant to California Water Code Section 13304," dated September 18, 2014 ("Order"). The Order  
6 alleges that a gasoline source resulted in the discharge of benzene, 1,2-DCA, and LNAPL. The  
7 Order directs Petitioners to complete an Interim Remedial Action Plan ("IRAP"), develop and  
8 update a site conceptual model, complete a site assessment and delineation of extent of wastes, and  
9 prepare a human health risk assessment. This work is required without providing substantial  
10 evidence that Petitioners' pipelines – Lines 32, 34, and 252 – are a likely source of gasoline.

11 Unless substantial evidence implicates Lines 32, 34, or 252 as a source, Petitioners should be  
12 dismissed from the Order or required to do nothing more than analyze and provide existing  
13 information related to the operation of Lines 32, 34, and 252. For these reasons, which are more  
14 fully discussed below, Petitioners request that the Order be vacated as to Petitioners or, alternatively,  
15 be modified in the manner specified in the Verified Petition. Petitioners further request that the  
16 Order be stayed pending the State Board's review of this Petition.

17 **II. BACKGROUND**

18 The Verified Petition provides relevant background. In addition, Petitioners' investigations  
19 found numerous reasons why Lines 32, 34, and 252 were not sources of wastes at the OOI Site or the  
20 Site in the Order:

- 21 a) Lines 32, 34, and 252 are located approximately five feet below ground surface and  
22 yet there is no evidence of shallow soil pollution; data do not establish a "track of  
23 shallow . . . benzene";
- 24 b) soils/soil vapor are not impacted near Lines 32, 34, and 252 in a manner that would  
25 be indicative of a top-down pipeline release of gasoline;
- 26 c) the forensic signature of shallow benzene from OOI's VES well A matches the  
27 forensic signature of benzene on OOI's property, suggesting the same source;
- 28 d) OOI handled and discharged many materials that contain benzene, including oil field

1 production waste, refinery waste and possibly gas condensate, which contained  
2 benzene; and

3 e) chemical fingerprint data do not show a forensic signature for gasoline, which would  
4 be expected if the only source of contaminants was a gasoline pipeline release;  
5 instead, forensic signatures indicate (i) multiple types of contamination, not a  
6 gasoline source along Golden Avenue as stated by the Board and (ii) a release from  
7 operations such as OOI's, that included processing of a variety of input streams in  
8 large quantities and over decades of operation. *See Exh.2 and Exh.5.*

9 Despite this evidence, the Regional Board concluded that Petitioners' predecessors'  
10 operation of Lines 32, 34, and 252 caused the benzene, 1,2-DCA and LNAPL at the Site for several  
11 reasons, *See Exh. 1, Order, at ¶7.* These reasons are listed below in italics along with details that  
12 have been shared with the Regional Board in response.

- 13 1. *ATSC operates Line 32 for crude and dark refined product.*
- 14 2. *ATSC operates Line 34 for diesel and other refined product (including gasoline).*
- 15 3. *ATSC owned Line 252 for the transport of gasoline and waste water.*

16 As explained in the Verified Petition, Lines 32, 34, and 252 are not likely sources of  
17 gasoline. Only Line 252 carried gasoline prior to 1953, and any pre-1953 gasoline release would  
18 have likely degraded within the past 60 years in the absence of gasoline free product.<sup>24</sup> Even if the  
19 any of the lines were used for gasoline after 1953 – which records document they were not – there is  
20 no evidence that they leaked and caused benzene, 1,2-DCA or LNAPL.<sup>25</sup>

- 21 4. *The only pipelines identified as carrying refined products are BP's and lines on  
22 Baker Street are too far away to matter.*

23 The 18 other pipelines are not too far away to matter, and each of their contents is not well  
24 documented. As explained in the Petition, Petitioners and their predecessors have provided

25 \_\_\_\_\_  
26 <sup>24</sup> The California Low Threat Closure Policy provides that "petroleum fuels naturally attenuate in the  
27 environment through adsorption, dispersion, dilution, volatilization, and biological degradation. This natural attenuation  
28 slows and limits the migration of dissolved petroleum plumes in groundwater."

<sup>25</sup> Line 252 was also used for wastewater, but the Order does not specify, nor do Petitioners' records show, how  
wastewater use of Line 252 could be a viable "gasoline source" responsible for 1,2-DCA, benzene, or LNAPL.

1 extensive information but public records do not show the same level of investigation by the other 18  
2 nearby pipeline operators. Further, six wastewater or storm water lines cross the Site or Baker Street  
3 and have diameters of 12 to 24 inches. One of these lines ruptured in 1996 at Golden and Baker, the  
4 north end of the Site near AOC A. The exact content of the 1996 spill is not known but the 1990  
5 rupture in another part of the OOI line carried materials with a benzene content of 2,110 ppb.

6 5. *Data indicate a "track of shallow soil for benzene" near AOC A.*

7 There is no track of shallow benzene for several reasons. First, the highest shallow soil vapor  
8 benzene detections were found north of Baker Street (not along Golden) at CESV-2 on the northern  
9 portion of the OOI Site (*i.e.*, within a former OOI wastewater basin). Second, soil vapor benzene  
10 concentration increases with depth at most locations at the Site. For example, benzene  
11 concentrations at CESV-33 increase at 20 feet below ground surface. This indicates a deeper source  
12 of contamination, not a shallow pipeline source. *See* Exh. 5, Dec. 4, 2012 letter, at 10-11. Third,  
13 benzene is present in shallow soil vapor samples collected from VES-A, near AOC A, but analytical  
14 data show that gasoline is not the source of the benzene. Specifically, the sample collected from  
15 VES-A (*i.e.*, in AOC A) contains predominantly cyclic hydrocarbons, not branched hydrocarbons,  
16 which suggests that the composition of the soil vapor is of an unrefined nature. The VES-A sample  
17 chromatograms lack the triplet of ethylbenzene and xylenes peaks present in gasoline. In addition,  
18 iso-octane was not present in this sample. Therefore, the VES-A soil vapor is not sourced from  
19 gasoline. *Id.* Further, in AOC A, not only is subsurface vapor not sourced from gasoline, it instead  
20 matches precisely with the vapor on the OOI Site adjacent to Golden Avenue and the northern  
21 portion of the OOI Site north of Baker Street. *See* Exh. 5 at 10-11.

22 6. *At AOC B, a product sample at Brycon-MW1 had indicators a gasoline source (high*  
23 *concentrations of n-alkanes, heptane octane, nonane, and decane; and historic*  
24 *leaded gasoline contained elevated n-alkane. "The presence of high n-alkane . . .*  
25 *suggests that this product may represent an old leaded gasoline. . . The only known*  
26 *source of gasoline in the area is BP Line 34."*

27 Data do not support this assertion. Recent investigations show that the chromatogram of the  
28 LNAPL sample indicates the product appears to be dominated by a kerosene range product (*e.g.*,

1 Stoddard solvent). The presence of lead may indicate a minor component of leaded gasoline.<sup>26</sup>  
2 However, OOI is known to have accepted refinery waste, including tank bottoms, which may have  
3 contained elevated concentrations of lead.<sup>27</sup> Sludge was known to accumulate within all the basins,  
4 and approximately 6,000 cubic yards of sludge was stored in OOI former basins (Basins 3 and 4)  
5 directly east and southeast of Brycon MW-1.<sup>28</sup> The detection of LNAPL at Brycon MW-1 in  
6 September 2012 was coincident with groundwater flow moving from the OOI basins to the east-  
7 southeast. Groundwater movement has since returned to the northwest; in the most recent  
8 groundwater monitoring report (July 2014), LNAPL was not detected. See Exh. 5, Dec. 4, 2012  
9 letter, at 12-13.

10 7. *1,2-dichloroethane (1,2-DCA) is a lead scavenger added to leaded gasoline to*  
11 *prevent buildup of lead oxide; it was detected along BP pipelines.*

12 Several facts demonstrate that this conclusion contradicts data. First, Lines 32, 34, and 252  
13 are not viable gasoline sources. Even if they were, however, the detection of 1,2-DCA does not  
14 mean gasoline is the source. Materials other than gasoline contain this constituent, including  
15 petrochemical waste and cleaning solvents.<sup>29</sup> Second, 1,2-DCA has been detected in groundwater  
16 along the eastern boundary of the OOI Site as well as north of Baker Street. Located on the eastern  
17 side of the OOI site are OOI sumps, which may have discharged waste; the sewer line that accepted  
18 OOI effluent; and OOI wastewater lines (with known releases). Indeed, Jack K. Bryant and  
19 Associates, Inc., concluded on behalf of OOI, that 1,2-DCA was caused by inflow via the brine

20  
21 <sup>26</sup> This data was shared with the Regional Board in November 26, 2013 letter regarding split sampling  
22 conducted by Petitioners and OOI.

23 <sup>27</sup> U.S. EPA "Associated Waste Report: Crude Oil Tank Bottoms and Oily Debris" (January 2000, Washington  
24 D.C.).

25 <sup>28</sup> It has been documented that the basins contained 51,800 barrels of sludge material in an OOI letter to the  
26 Long Beach Department of Health and Human Services with regard to proposed cleanup. OOI, 2001. Letter from Tom  
27 Cacek, Secretary/Treasurer OOI, February 5. In 1986, STV Engineers documented that Basin 3 and Basin 4 contained  
28 approximately 6,360 cubic yards of sludge to be land farmed. STV/Seelye Stevenson Value & Knecht, 1986. Proposal  
to Use Soil Cultivation for Treatment of the Material Now Contained in Basins 3 and 4 – Oil Operators Long Beach  
Treatment Facility.

<sup>29</sup> U.S. EPA, "Technical Fact Sheet On: 1,2-Dichloroethane." See also Agency for Toxic Substances and  
Disease Registry, 1-2 Dichloroethane Fact Sheet, September 2001.

1 pipeline and contaminant infiltration via the settling ponds.<sup>30</sup> Third, 1,2-DCA was not detected in  
2 shallow soil, further demonstrating no pipeline source. See Exh. 5, Dec. 4, 2012 letter, at 12-13.

3 8. *Maximum concentrations of benzene in groundwater align with BP pipelines;*  
4 *benzene exists in gasoline, which BP transported in Lines 34 and 252, and possibly in*  
5 *Line 32.*

6 High concentrations of benzene at the eastern border of the OOI Site (along the pipelines) are  
7 not necessarily indicators of gasoline. Located on the eastern side of the OOI site are: OOI basins  
8 (through which waste likely infiltrated directly to the subsurface), OOI sumps, which may have  
9 discharged waste; the VCP sewer line that accepted OOI effluent; and OOI wastewater lines (with  
10 known releases). At this location, the facts and forensics fingerprinting analysis show that the  
11 benzene detected is not sourced from gasoline, and even if the benzene were from gasoline, Line 32  
12 and Line 34 have no record of transporting gasoline. Line 252 transported gasoline only prior to  
13 1953, and the benzene likely would have degraded within 60 years in the absence of gasoline free  
14 product.

15 Also, benzene is contained in materials other than gasoline, including but not limited to the  
16 millions of gallons per day of benzene-containing wastewater and oil field brine (known to contain  
17 high benzene) processed at the OOI Site. OOI influent and effluent samples contained high benzene  
18 concentrations. Benzene detected in influent was monitored over a six-day period with benzene  
19 concentrations ranging between 1,330 ppb and 5,110 ppb.<sup>31</sup> In 1990, OOI's corroded wastewater  
20 pipeline ruptured offsite, releasing wastewater with benzene concentrations of 2,010 ppb. See Exh.  
21 5, Dec. 4, 2012 letter, at 14-15.

22 For all these reasons, the Order is not supported by the factual record. Legal authorities,  
23 discussed below, also do not provide support for the Order.

24 ///

25 ///

---

27 <sup>30</sup> JKBA, 1992.

28 <sup>31</sup> JKBA, 1992.

1 **III. ARGUMENT**

2 **A. The Order is Not Authorized for Pre-1970 Conduct**

3 As a preliminary matter, the Order is not authorized to extend to pre-1970 conduct. Exhibit  
4 B of the Order lists Line 252 as a known source of gasoline prior to 1953. The Porter-Cologne Act,  
5 however, became effective January 1, 1970; thus, Water Code section 13304 normally only applies  
6 to a discharge occurring after January 1, 1970; the section has no retroactive effect. “Retroactive  
7 application was not intended . . . nor is it permissible[.]” *In re Atchison, Topeka & Santa Fe Railway*  
8 *Co.* (Order No. WQ 74-13, August 15, 1974), 1974 Cal. ENV LEXIS 2 at \*8. If there is a pre-1970  
9 discharge, the Regional Board has jurisdiction to order cleanup or abatement only “inasmuch as the  
10 discharge continues to occur and expand.” *Id.* For example, in *Atchison, Topeka & Santa Fe*  
11 *Railway*, the State Board identified a series of pre-1970 discharges with post-1970 effects associated  
12 with subsurface waste disposal that ceased in or around 1968. *Id.* at 3-4, 9.

13 In this matter, the State Board has found no pre-1970 release from Line 252 and no post-  
14 1970 effects from any release. Any pre-1953 release would have likely degraded within 60 years in  
15 the absence of gasoline free product. The Board admits the lack of near-surface data of a pre-1953  
16 release and chooses instead to interpret the absence of data to indicate that movement of the mass  
17 migrated downward. *See* Exh. 1, Order, at Resp. to Comment 1.12. But, the extensive data along  
18 the Site do not support the occurrence of a mechanism that could move a near-surface mass  
19 downward from five feet to 20 feet, then trap it in the deeper vadose zone, and degrade all impacts in  
20 between. The lithology at the Site has been logged as sand and silty sand and does not support that  
21 remnants of a historical near-surface release are trapped in subsurface layers.<sup>32</sup> However, a  
22 secondary source on OOI property (*e.g.*, large volumes of impacted sludge within a former basin  
23 and/or discharged via a sump) could potentially explain the elevated soil concentrations in the  
24 vadose zone in Wrigley Heights. Due to the lack of credible evidence, Line 252 should be removed  
25 from the Order as a potential source of gasoline.

26 <sup>32</sup> Boring logs consistently show sand and silty sand layers at the Site. *See* Brycon, 2011. Report on Additional  
27 Site Characterization, Oil Operators, Inc. 712 Baker Street, Long Beach, CA SCP Case No., 0093, SCPID No. 2044M00.  
28 Prepared for Oil Operators, Inc. September 30, Newport Beach, CA.. California Environmental, 2012. Soil Vapor  
Extraction (SVE) Pilot Test Report. Area of Elevated VOC in Soil Gas, Vicinity of 712 Baker Street, Long Beach, CA  
90806. SCP Case No. 0093; SCP ID No. 2044M00. Agoura Hills, CA.

1           **B.       A Clean-up Order Is Not Proper Against Petitioners for Post-1970 Conduct**

2           The Order is not proper against Petitioners for post-1970 conduct. A clean-up and abatement  
3 order may be issued only to a person “who has caused or permitted, causes or permits, or threatens to  
4 cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged  
5 into the waters of the state and creates, or threatens to create, a condition of pollution of nuisance.”

6 Cal. Water Code § 13304.. “[T]he legislative history of the ‘causes or permits’ language . . .

7 supports [the] conclusion that the Legislature did not intend the act to impose liability on those with

8           [•]       no . . . control over . . . the discharge, and

9           [•]       whose involvement in a discharge was remote[.]” *City of Modesto Redevelopment*

10                   *Agency v. Superior Court*, 119 Cal. App. 4th 28, 36, 43 (2004).

11           Here, Petitioners had no control over any discharge from Lines 32, 34, or 252 because there  
12 was no discharge from these lines at the Site, according to all available records. Petitioners’  
13 involvement in the alleged discharge of wastes is remote, at best, because the Order hinges on the  
14 mere possibility that the “pipeline contents, especially in refined product lines, commonly change”  
15 and that a “release can occur even if there is no record of it.” *See* Exh. 1 at Resp. to Comment No.  
16 1.2. The Regional Board has speculated that a leak might have occurred and that Lines 32, 34, or  
17 252 might have carried gasoline at relevant times after 1970. These speculations demonstrate that  
18 Petitioners’ involvement at the Site is remote and, therefore, not sufficient to support the Order.

19           In a clean-up and abatement order “[t]here must be substantial evidence to support a finding  
20 of responsibility for each party named. This means credible and reasonable evidence which indicates  
21 the named party has responsibility.” *In the Matter of the Petition of Exxon Company, USA et al.*,  
22 WQO No. 85-7 at 11-12, 1985 WL 20026 at \*6 (Cal. St. Wat. Res. Bod. 1985); *In the Matter of*  
23 *Stinnes-Western Chemical Corporation*, WQO No. 86-16 at 11-12, 1986 WL 25523 (Cal. St. Wat.  
24 Res. Bd. 1986). Here, there continues to be no evidence that Petitioners discharged any  
25 contaminants or contributed to any discharge. This alone requires that the Order be vacated as to  
26 Petitioners. Not only is there a lack of credible evidence of a discharge by Petitioners, but ample  
27 evidence reflected in the Petition shows that Lines 32, 34, and 252 are not a “gasoline source” the  
28 Order contends is responsible for the benzene, 1,2-DCA and LNAPL at the eastern boundary of the

1 OOI Site.

2 The Order is improper – and will continue to be improper – because the Regional Board  
3 lacks substantial evidence that justifies requiring Petitioners to perform the work requested in the  
4 Order. Substantial evidence continues to demonstrate that Petitioners are not dischargers or  
5 threatened dischargers subject to the requirements of Water Code section 13304.

6 **C. The Leak Integrity Tests Must Be Considered and Were Not**

7 The Order is unreasonable in that the Regional Board has disregarded extensive leak integrity  
8 tests for Lines 32 and 34. These lines are the only remaining lines relevant to the Order since Line  
9 252 should be removed for the reasons stated in section III.A. Of these two lines, only Line 34 is an  
10 alleged gasoline source because Exhibit B of the Order acknowledges that Line 32 never carried  
11 gasoline. In any event, Line 32 tested tight in 2004 before it was taken out of service and again in  
12 2011 before it was placed into service.

13 Petitioners' records indicate that Line 34 was not used for transport of gasoline. In a  
14 November 6, 2013 letter, however, the Regional Board concluded “the source of the hydrocarbon  
15 vapors (primarily benzene) that have been detected under the BP pipelines, Golden Avenue, Wrigley  
16 Heights residences, and the OOI site is BP Line 34.” This conclusion is not supported by data. Line  
17 34 passed leak integrity tests in 1990, 1992, 1994, 1997, 1998, 2004, 2007, and 2010. *See* Exh. 4.

18 It is not legally permissible for the Regional Board to disregard these leak integrity tests.  
19 Leak integrity tests must be considered in evaluating orders under Water Code section 13304,  
20 according to the State Water Resources Control Board, which has said that “the results of these tests  
21 must certainly be considered in determining whether the [gasoline] tanks are the source of  
22 pollution.” *In re John Stuart* (Order No. WQ 86-15, September 1986), 1986 Cal. ENV LEXIS 17 at  
23 \*5. The only way the Regional Board could disregard such tests is if such results “are not sufficient  
24 to offset the evidence pointing the other way.” *Id.* Here, there is no evidence – much less sufficient  
25 evidence – to offset the leak integrity history for Lines 32 and 34. Without evidence to “point the  
26 other way,” the Regional Board cannot base the Order on the mere possibility that that a “release can  
27 occur even if there is no record of it.” *See* Exh. 1 at Response to Comment No. 1.2. The Regional  
28 Board must consider, and has not considered adequately, the leak integrity history of Lines 32 and

1 34. The leak integrity evidence supports removing Lines 32 and 34 from the Order as a potential  
2 source of benzene, 1,2-DCA or LNAPL. The Regional Board is unreasonable in its assertion that  
3 that a “release can occur even if there is no record of it.” See Exh. 1 at Resp. to Comment No. 1.2.

4 **D. Evidence of Other Primarily Responsible Parties**

5 Not only are Petitioners not dischargers or threatened dischargers, there is substantial  
6 evidence in the record of other dischargers primarily responsible. To require Petitioners to delineate  
7 the extent of benzene, 1,2-DCA and LNAPL impacts at the eastern edge of the OOI Site is  
8 unreasonable where neither the Regional Board nor Petitioners have found any credible evidence  
9 that Petitioners are a potential source documented releases and other evidence points to OOI. As a  
10 result, the burden of the directives in the Order upon Petitioners bears no reasonable relationship to  
11 the conditions at the Site. Additional costs of further investigation and remediation should be borne  
12 by OOI.

13 Petitioners believe that if they remain in the Order at all (which they should not), it should be  
14 as secondary responsible parties. State Water Board orders have found secondary liability status  
15 appropriate where, among other things, the discharger did not contribute to the discharge. *In The*  
16 *Matter Of The Petition Of Ultramar, Inc.*, Order WQ No. 2009-0001, 2009 WL 6527505, \*7 (Cal.  
17 St. Wat. Res. Bd. 2009) (citing Orders WQ 89-8, *Arthur Spitzer et al.* and WQ 86-18, *Vallco Park,*  
18 *Ltd.*) Here, there is no evidence that Petitioners contributed to a release at the Site. Accordingly, at  
19 most, Petitioners should be named as secondary responsible parties.

20 **1. The Order Disregards Groundwater Condition under OOI Site**

21 The Order disregards groundwater conditions at the OOI Site, which it should not. The  
22 Order admits: “The Regional Board acknowledges that benzene likely existed within the crude oil  
23 product wastewater process by OOI adjacent to Lines 32, 34, and 252.” See Exh. 1, Order at Resp.  
24 to Comment No. 1.16. This statement is partially incorrect. Benzene did not “likely” exist. It  
25 existed without question at high levels of at least up to 5,110 ppb.<sup>33</sup> The Order further states “the  
26 Regional Board is unaware of any soil data that indicates hydrocarbon impacts on the OOI property  
27

28 <sup>33</sup> JKBA, 1992.

1 north of Baker Street have a track to groundwater.” See Exh. 1, Order at Resp. to Comment No.  
2 1.11. Historically, at the OOI Site, some of the basins or sumps were 60 feet deep, directly at or  
3 above the groundwater table. OOI also conducted land-farming, which could diminish current  
4 evidence of a track to groundwater. Nonetheless, data on the OOI Site north of Baker Street show  
5 significant shallow impacts extending to the depth of groundwater.

6 In some cases, evidence of groundwater degradation under a site “is sufficient alone to  
7 support issuance of the cleanup and abatement orders.” *In re Aerojet* (Order No. WQ-80-4) 1980  
8 Cal. ENV LEXIS 13, \*42. In *Aerojet*, the “Regional Board received substantial uncontested  
9 evidence that toxic and hazardous chemicals which [had] been used at the Aerojet site [were] now  
10 found in significant amounts in groundwaters under the site. . . There was no dispute that the  
11 presence of the chemicals in groundwater under the Aerojet site [was] due to the waste disposal  
12 practices of Aerojet and its subsidiaries.” *Id.* at \*23-24.

13 Here, there is no dispute that OOI has operated at the OOI Site for more than 60 years  
14 processing hazardous substances and wastes, including benzene. There is no dispute that OOI had  
15 documented releases, illegal dumping, and regulatory violations and nuisance complaints associated  
16 with its operation of the Site.<sup>34</sup> There is no dispute that hazardous chemicals, including benzene, at  
17 the OOI Site have been found in significant amounts in groundwater under the OOI Site. Indeed, the  
18 OOI wastewater lines are located along the eastern boundary of OOI where groundwater impacts  
19 exist. Thus, there should be no dispute that such chemicals were discharged by OOI to groundwater  
20 underlying the OOI Site, which overlaps the Site in the Order. Along with benzene, 1,2-DCA exists  
21 in groundwater and in deeper soil and soil vapor at the OOI Site at locations CESV10, CESV15,  
22 CESV19, CESV30 and CESV33. See Exh. 5, Dec. 4, 2012 letter, at 10.

23  
24 <sup>34</sup> See Verified Petition. Among other things, between 1990 and 1996, the OOI wastewater lines entering OOI  
25 property at either end of Golden Avenue ruptured off site due to corrosion at least three times, causing releases of hot  
26 brine water, crude, wastewater, and sludge into the environment. One release in 1996 occurred at the corner of Golden  
27 Avenue and Baker Street. The other two documented releases were farther from the Site and may not have directly  
28 contributed impacts; however, they further demonstrate that OOI had a corroded wastewater line (i.e., the influent line  
carrying brine, refinery waste, etc., to the OOI Site), which may have ruptured or leaked at other places that suffered  
corrosion. Analytical data from the 1990 release detected 2,010 ppb benzene in the brine water.

1           **The Order Should Consider Evidence of OOI as an RP**

2           The Order should consider evidence of OOI as a responsible party for the various reasons  
3           Petitioners' predecessors have been communicating to the Board since 2012. Normally, several  
4           types of evidence compel a regional board to impose liability under Section 13304. For example,  
5           liability has been imposed for:

- 6           •       “pipelines . . . which traverse the area of heaviest contamination,” (*see e.g., In re*  
7           *Union Oil Company of California* (Order No. WQ 90-2, April 19, 1990), 1990 Cal.  
8           ENV LEXIS 23 at \*7);
- 9           •       “unlined and inadequately lined ponds” that handled non-hazardous olive processing  
10           wastewater (*see e.g., In re Lindsay Olive Growers* (Order No. WQ 93-17, Nov. 18,  
11           1993) 1993 Cal. ENV LEXIS 23 at \*1-\*2);
- 12           •       “unlined ponds” that handled 20,000 gallons per day of process wastewater that  
13           contained dissolved salts, organic chemicals, phenols, arsenic, other heavy metals and  
14           inorganic constituents associated with chemical manufacturing facilities (*see e.g., In*  
15           *re Aerojet General Corp.* (Order No. WQ 80-4, March 23, 1980), 1980 Cal. ENV  
16           LEXIS 13 at \*3-\*4.

17           At the OOI Site, each of the above-named structures existed. The OOI Site had:

- 18           •       various OOI pipelines within and near AOC A and AOC, and these pipelines traverse  
19           in areas of contamination; \
- 20           •       basins and sumps are also in proximity to AOC A and AOC B on the OOI property,  
21           some as deep as 60 feet (*i.e.*, potentially a direct injection point to groundwater);  
22           and<sup>35</sup>
- 23           •       12 basins that not only stored but also processed in excess of 4,200,000 gallons per  
24           gallons of waste fluids per day on the northern and southern portions of the OOI  
25           property.

26           //

27           //

28           

---

<sup>35</sup> Product and gasoline indicators also coincide with the path of the OOI wastewater line; benzene was detected in soil samples (including shallow soil, *i.e.*, < 5 feet) collected on the OOI property. *See* Exh. 5, Dec. 4, 2012 Letter, at 8-9. Diesel-range organics (DRO) were detected in shallow and deep samples on the OOI north property at concentrations orders of magnitude higher than detected in soil samples collected near Golden Avenue, which indicates an OOI source of DRO impact. *Id.*

1 OOI's structures are the same types of structures that served as ample evidence to support clean-up  
2 and abatement orders in past cases. To be consistent with prior orders, the Regional Board should  
3 have named OOI as the primarily responsible party in the Order.

4 Moreover, where multiple responsible parties are potentially involved, as is the case here, the  
5 State Water Resources Control Board has recognized that "issuance of either a consolidated order or  
6 coordinated orders will clearly define the work left to be done for all dischargers, and will provide a  
7 roadmap." *In re Union Oil Company of California* (Order No. WQ 90-2, April 19, 1990), 1990 Cal.  
8 ENV LEXIS 23 at \*11-\*12. In *Union Oil*, for example, Union Oil petitioned for review and stay of  
9 a clean-up and abatement order that was issued to only two parties for the clean-up of a plume of  
10 petroleum hydrocarbon contamination in groundwater beneath downtown San Diego. The State  
11 Board denied relief to Union but remanded the matter to the regional board for further proceedings.  
12 The State Board noted that Union would be required to undertake "the same remedial work . . . if it  
13 is found to be responsible for discharges from either the gasoline station or the pipeline or both." *Id.*  
14 at \*13.

15 **E. If Order is Vague and Ambiguous and Should Be Amended**

16 The Order is vague and ambiguous. It defines the Site as "Golden Avenue between Baker  
17 Street and West Wardlow Road;" however, this fails to account for the overlap between the Site and  
18 the eastern edge of the OOI Site investigation. *See* Exh. 1, Order, at 1. It fails to describe the basis  
19 for naming Petitioners as dischargers, except for the Order's assertion that Petitioners are dischargers  
20 merely based on the existence of pipelines at the Site. *See* Exh. 1, Order, at ¶ 7. If the Order is not  
21 vacated as to Petitioners, it should be amended to address these ambiguities.

22 **F. The Order is Unreasonable and A Stay Should be Issued**

23 The Order is unreasonable in that the Regional Board has failed to provide Petitioners with a  
24 meaningful opportunity to address or refute the Order's alleged findings and directives with existing  
25 information and data. Petitioners and their predecessors have undertaken a diligent factual and  
26 technical evaluation that demonstrates Lines 32, 34, and 252 are not gasoline sources for benzene,  
27 1,2-DCA and LNAPL at the Site. Petitioners' predecessors met and conferred with the Regional  
28 Board on numerous occasions, and the parties agreed that Petitioners should refrain from submitting

1 further work plans until after Regional Board review of the data provided on December 4, 2012 and  
2 on May 28, 2013. The Order issued despite the expectation that the parties would resolve  
3 differences of opinion on an appropriate scope of investigative work under the May 11, 2012 Water  
4 Code 13267 investigative order.

5 To allow the Regional Board to continue to enforce the Order in this fashion continues to  
6 deny Petitioners procedural due process and results in substantial harm. Petitioners face unjustified  
7 and inappropriate regulatory requirements, costs, and potential civil liability for failure to comply  
8 with the Order. If the Order is not vacated as to Petitioners, it should be amended to provide  
9 additional time to further demonstrate to the Regional Board the lack of evidentiary support for  
10 imposing the extensive requirements of the Order upon Petitioners to address the eastern edge of the  
11 OOI Site.

12 Petitioners request that the Board stay enforcement of the Order until the merits of this  
13 Petition may be reviewed. A stay should be issued where, as here, a Petitioner establishes (1)  
14 substantial harm to the Petitioners or to the public interest if a stay is not granted; (2) a lack of  
15 substantial harm to other interested persons and to the public interest if a stay is granted; and (3)  
16 substantial questions of law and fact regarding the disputed action. (Cal. Code Regs. tit. 23 § 2053.)

17 Should Petitioners be subject to the Order's requirement during the pendency of this Petition,  
18 Petitioners would suffer substantial harm because the Order requires extensive environmental  
19 investigation and remediation, the costs of which would be substantial. While Petitioners will suffer  
20 substantial harm without issuance of a stay, neither the public interest nor any interested parties will  
21 suffer harm in the event the stay is issued because the responsible party, would remain subject to the  
22 clean-up requirements at the OOI Site. Additionally, there is substantial doubt about the validity of  
23 the Order (both on the facts and the law); the Order fails to cite evidence establishing that Petitioners  
24 have discharged or is suspected of discharging waste; and, all the relevant evidence cited in the  
25 Order points to another party.

26 //

27 //

28 //

1 For all the foregoing reasons, Petitioners request that the State Board grant the relief  
2 requested in this petition.

3  
4 DATED: October 20, 2014

VIVIANA L. HEGER  
**TROPIO & MORLAN**  
DEBORAH P. FELT  
**TESORO REFINING & MARKETING COMPANY LLC**

6  
7 

8 Viviana L. Heger

9 Attorneys for Petitioners  
**TESORO REFINING & MARKETING COMPANY LLC**  
**TESORO SOCIAL PIPELINE COMPANY LLC**

10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

# EXHIBIT 1



EDMUND G. BROWN JR.  
GOVERNOR

MATHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

**Los Angeles Regional Water Quality Control Board**

September 18, 2014

Mr. Chris Windsor  
BP Pipelines (North America), Inc.;  
Atlantic Richfield Company; and  
ARCO Terminal Services Corporation  
4 Centerpointe Drive  
La Palma, CA 90623-1066

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
7008 1830 0004 3359 1732

**SUBJECT: CLEANUP AND ABATEMENT ORDER NO. R4-2013-0064  
PURSUANT TO CALIFORNIA WATER CODE SECTION 13304**

**SITE/CASE: FORMER BP/ARCO PIPELINES, GOLDEN AVENUE, BETWEEN BAKER STREET AND WEST  
WARDLOW ROAD, LONG BEACH, CALIFORNIA (SCP NO. 0093A AND SITE ID NO.  
2040420)**

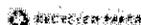
Dear Mr. Windsor:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within major portions of Los Angeles County and Ventura County, including the above-referenced site (Site). The Regional Board recently performed an evaluation of environmental Site conditions and identified areas requiring additional delineation and remediation. In accordance with our responsibilities for the protection of water quality and beneficial uses, enclosed is Cleanup and Abatement Order (CAO) No. R4-2013-0064, directing BP Pipelines (North America), Inc.; Atlantic Richfield Company; and ARCO Terminal Services Corporation to investigate, monitor, cleanup, and abate the effects of wastes discharged to the soil and groundwater from pipelines in the vicinity of Golden Avenue, between Baker Street and West Wardlow Road, in Long Beach, California. This CAO is prepared pursuant to sections 13267 and 13304 of the California Water Code.

A draft of this CAO ("Tentative CAO") was released for public review and comment on April 26, 2013. Where appropriate, the attached CAO No. R4-2013-0064 contains changes based upon comments received. Responses to comments received are provided in the enclosed table, *Response to Comments - Draft Cleanup and Abatement Order No. R4-2013-0064*.

CHARLES STRINGER, CHAIR | SAMUEL UNDER, EXECUTIVE OFFICER

320 West 4th St., Suite 200, Los Angeles, CA 90013 | [www.waterboards.ca.gov/losangeles](http://www.waterboards.ca.gov/losangeles)



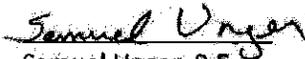
Mr. Chris Windsor  
BP Pipelines (North America), Inc.;  
Atlantic Richfield Company; and  
ARCO Terminal Services Corporation

- 2 -

September 18, 2014

Should you have any questions, please contact Mr. Greg Bishop at (213) 576-6727 or  
Greg.Bishop@waterboards.ca.gov.

Sincerely,



Samuel Unger, P.E.  
Executive Officer

Enclosure: CAO No. R4-2013-0064  
*Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064*

cc: (via e-mail)

Mr. Charles I. Buckley, California Environmental Geologists & Engineers, Inc.  
Mr. Stephen Comley, BP Pipelines (North America) Inc.  
Mr. Darrel Fah, Tesoro Refining and Marketing Company LLC  
Mr. Ngiabi Gicuhl, Plains West Coast Terminals, LLC  
Ms. Joan Greenwood, Wrigley Area Neighborhood Alliance  
Councilmember Roberto Uranga, City of Long Beach  
Mr. Nelson Kerr, City of Long Beach, Health and Human Services Department  
Mr. Kevin Laney, Oil Operators, Inc.  
Mr. George B. Paspalof, Brycon LLC  
Ms. Carmen Piro, City of Long Beach, Health and Human Services Department  
Ms. Gabriele Windgasse, California Department of Public Health.

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

<b>Comment No.</b>	<b>Commenter</b>
1	BP Pipelines (North America) Inc. (BP) dated May 28, 2013

This table describes all significant comments received from interested persons with regard to the above-referenced tentative order. Each comment has a corresponding response and, if applicable, action taken.

<b>Commenter/ Comment No.</b>	<b>Comment Summary</b>	<b>Response</b>
BP/1.1	BP/ARCO Pipelines (BP) has been working cooperatively with Water Board staff for over a year to identify the source of groundwater pollution adjacent to the Oil Operators, Inc. site. We were frankly surprised to receive the tentative Cleanup and Abatement Order concluding that we are solely responsible for this pollution.	Information in the Regional Board's files indicates that BP, Atlantic Richfield Company (ARCO), and ARCO Terminal Services Corporation are collectively responsible for the waste discharged at the Site. This is due to their current and/or former ownership or their present and/or past operations of pipelines that transported refined products at the Site that resulted in the discharge of wastes. The Regional Board has ruled out other possible sources of the wastes at the Site.
BP/1.2	As you know, we disagree with the Board's determination. These reasons were communicated to the Board in our December 4, 2012 letter and have been covered in numerous communications with Water Board staff. There are a number of reasons why including: <ol style="list-style-type: none"> <li>1. We have no record of gasoline pipeline leaks from any of the three pipelines that BP operates under Golden Avenue.</li> <li>2. Only one of our three pipelines carried gasoline and that was 60 years ago.</li> <li>3. Our pipelines are located approximately five feet below ground surface and yet there is no evidence of shallow soil pollution.</li> <li>4. Benzene has been detected in groundwater under the Oil Operators, Inc.'s site.</li> <li>5. "Fingerprinting" of the hydrocarbons do not show a consistent pattern as would be expected from a pipeline leak.</li> <li>6. We are concerned that much of the underlying data that staff is relying on has been collected and reported by OO's consultant, Brycon, LLP which has consistently misrepresented, intentionally or non-intentionally, the condition of the Oil Operators, Inc. site and off property data.</li> <li>7. The nature of the contaminants and their location points more</li> </ol>	Regional Board staff responded to BP's December 4, 2012, letter on April 24, 2013. In that response, Regional Board staff indicated that it had reviewed the information presented by BP and generally disagreed with the assertions and technical evidence in that letter. Regional Board staff also referred to its prior letter dated November 6, 2012, whereby staff indicated that it had determined that the source of the detected contamination at the site is pipelines owned and/or operated by BP and ARCO. As previously indicated, the Regional Board has ruled out other possible sources of the wastes at the site, including the operations of the Oil Operators, Inc. (OOI) site. To date, BP has not provided the Regional Board with evidence that the pipelines are not the source of the wastes at the site or that other entities are the source.  Just because BP has no record of gasoline pipeline leaks from any of the three pipelines that BP operated under Golden Avenue does not mean that a release did not occur. A release can occur even if there is no record of it.

Information in the Regional Board's files, including pipeline inventory

Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064

logically to the operations of the Oil Operators, Inc. site.

records, indicates that at least two pipelines carried gasoline. Lines 34 and 252 transported dark refined products and other refined products, including gasoline. Line 32 transported crude oil and dark refined products. The Regional Board acknowledges that BP records indicate that Line 252 only transported gasoline until 1953.

The Regional Board is not aware of any soil assessment data in Golden Avenue. Instead, soil gas data exists from locations within and near Golden Avenue. At least two soil gas probe locations (CESV21 and especially CESV33) show patterns where peak benzene concentrations were detected from depths of approximately 27 to 30 feet above mean sea level with significantly lower benzene concentrations detected below these elevations toward the water table. The Regional Board interprets this pattern to be indicative of a nearby (not necessarily directly "overhead") release source, a conclusion that BP's consultant Dr. Blayne Hartman concurred with (with regard to location CESV33) during a December 2012 meeting between the Regional Board and BP.

The Regional Board is aware that benzene has been detected below OOI's site. While the OOI site may have benzene sources of their own, the distribution of benzene in their wells suggests a release source along Golden Avenue, consistent with the locations of Lines 32, 34, and 252.

"Fingerprinting" would be expected to show a consistent pattern associated with a pipeline leak only if all of the following were true: (1) the pipeline carried only one product type that never varied in composition while the leak occurred; (2) only one pipeline experienced a release; and (3) degradation did not occur. Since (1) pipeline contents, especially in refined product lines, commonly change; (2) the possibility of multiple pipeline releases (with multiple product types) has not been ruled out; and (3) degradation of product is likely to have occurred, the Regional Board does not consider deviation in "fingerprinting" results to support ruling out the probability of one or more pipeline releases from Lines 32, 34, and/or 252.

Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064

		<p>Lastly, while BP takes issue with information collected and reported by OOI's consultant, BP provides no evidence that such information has been, in fact, misrepresented, either intentionally or non-intentionally, except as identified in Comment 1.23. The Regional Board is entitled to rely on information in its files unless that information has been determined not to be credible. Mere allegation that information is not credible will not suffice.</p>
BP/1.3	<p>The Oil Operators, Inc. site came to be under Water Board oversight as a result of a Consent Decree settlement of a criminal complaint brought by the City of Long Beach Department of Health and Human Services. There is ample documentation to show that the site accepted a variety of petroleum waste. The site has been closed since 1989 and as such it was not authorized to accept additional waste. Yet nearby community residents noticed, and reported to authorities, several vacuum trucks discharging waste as late as 2000.</p>	<p>The Regional Board is currently overseeing assessment and remediation activities at the OOI site. However, the Regional Board has thoroughly investigated, and ruled out, the OOI site as a possible source of the wastes discharged at the site (generally along Lines 32, 34, and 252 and areas affected by releases originating from these lines) that is the subject of the CAO.</p>
BP/1.4	<p>We have repeatedly stated that if we believe we are the cause of the groundwater contamination we will step up and take responsibility. We renew that pledge. If sampling reveals that, contrary to our current information, BP is responsible or partially responsible, we will begin cleanup immediately. We have detailed comments on the tentative Cleanup and Abatement Order and they are included as Attachment 1 to this letter. If the Order is issued, we plan to appeal it to the State Water Board. However, we will submit a revised sampling plan to staff whether or not the Board issues the Order.</p> <p>Finally, we ask that the Board reconsiders issuing a Cleanup and Abatement Order to BP until the accuracy of the Oil Operators Inc. data can be verified. As pointed out in our May 24th letter to Mr. Pinaki Guha-Niyogi, the April 15th report submitted by Brycon, LLP stated that approximately 4,000 pounds of benzene was collected by the soil vapor extraction system- the actual amount is closer to two pounds. When existing data are reviewed and additional data are collected we believe the Board will have a more robust picture of the site from which to make a decision.</p> <p>BP has taken numerous steps to work cooperatively with the</p>	<p>The Regional Board appreciates BP's offer to submit a revised sampling plan. Please see specific responses below to BP's detailed comments in Attachment 1.</p>
BP/1.5		<p>See responses to Comments 1.2, 1.6, and 1.23. A delay in issuing the CAO is not warranted. The Regional Board has sufficient information at this time indicating that pipelines owned and/or operated by BP, ARCO, and ARCO Terminal Services Corporation are collectively responsible for the waste discharged at the site. However, the Regional Board will evaluate new information as it is produced.</p>
BP/1.6		<p>Communications from OOI have not interfered with the Regional</p>

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

<p>LARWQCB but communications from Oil Operators, Inc. (OOI) have interfered.</p> <p>• In September and October 2012, however, OOI shared data with the LARWQCB and apparently led the Board to believe that BP pipelines were impacting the eastern boundary of the OOI site (particularly the southeast corner (SEC) of the OOI site). The OOI data BP has reviewed are not entirely accurate. Among other things, the data reported iso-concentration maps for benzene as one continuous source extending to this SEC and into residential neighborhoods farther east. To date, the existing groundwater data do not support the depictions. Significant topographic variation is not accurately depicted on 2010 and 2011 OOI and California Environmental drawings.</p>	<p>Board's willingness to work cooperatively with BP. In this case, the Regional Board considered all information submitted to it by BP, as well as OOI, in investigating the discharge of wastes at the site.</p> <p>The Regional Board did not rely solely on OOI figures and interpretations in making its determinations. Among other things, the Regional Board constructed its own plume maps for groundwater.</p> <p>The Regional Board agrees that there is a lack of data defining an eastern boundary for impacts, particularly in soil and groundwater (as opposed to soil gas). After BP/ARCO/ATSC completes the investigative work under the CAO, we expect to have a more robust depiction of conditions.</p>
<p>BP/1.7</p> <p>Overall, the detailed facts, statements, and evaluations presented in the BP December 4, 2012 letter, which presented detailed summaries and evaluation of data available at that time, appear to have been disregarded by the LARWQCB.</p> <p>The Tentative CAO does not acknowledge receipt of BP's letter dated December 4, 2012, nor the meeting between BP and the LARWQCB on December 5, 2012.</p>	<p>The Regional Board did not disregard BP's December 4, 2012 letter. To the contrary, Regional Board staff fully considered the letter prior to preparing the Tentative CAO.</p> <p>On April 24, 2013, Regional Board staff acknowledged receipt of BP's letter dated December 4, 2012. In that response, Regional Board staff indicated that it had reviewed the information presented by BP and generally disagreed with the assertions and technical evidence in that letter.</p> <p>Regional Board staff also acknowledges meeting with BP and their representatives on December 5, 2012, prior to issuance of the Tentative CAO. During that meeting, Regional Board staff verbally responded to many of BP's statements and evaluations.</p> <p>Regional Board staff's position did not change upon review of the December 4, 2012 letter or the technical and legal arguments presented during the December 5, 2012, meeting.</p>

Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064

	<p>Based on discussions at this meeting and articulated in follow-up correspondence, the LARWQCB indicated BP should wait for the Board to respond to additional data before proposing further work requested in the 13267 Order. Therefore, BP was awaiting a written response from LARWQCB to this letter and meeting. The issuance of the tentative CAO is inconsistent with BP's understanding from the Board that it should hold off further response to the 13267 order until further notice from the Board.</p>	<p>Finding 10 of the CAO has been modified to reflect acknowledgement of BP's December 4, 2012, letter and the meeting on December 5, 2012.</p>
<p>BP / 1.8</p>	<p>Based on discussions at this meeting and articulated in follow-up correspondence, the LARWQCB indicated BP should wait for the Board to respond to additional data before proposing further work requested in the 13267 Order. Therefore, BP was awaiting a written response from LARWQCB to this letter and meeting. The issuance of the tentative CAO is inconsistent with BP's understanding from the Board that it should hold off further response to the 13267 order until further notice from the Board.</p>	<p>On April 24, 2013, Regional Board staff responded to BP's December 4, 2012 letter. In that response, Regional Board staff indicated that it had reviewed the information presented by BP and generally disagreed with the assertions and technical evidence in that letter. In addition, Regional Board staff provided advanced notice to BP that it was currently completing a tentative CAO that would be issued to BP and ARCO and that the tentative CAO would be subject to a 30-day public review and comment period.</p>
<p>BP / 1.9</p>	<p><u>Finding 2</u></p> <p>"Adjacent to the west of Golden Avenue and the pipelines is the vacant Oil Operator's Inc. (OOI) site, which was formerly used to treat production brines, containing water and crude oil, recovered during oil production since 1926." This statement appears to ignore documentation related to OOI operations that indicates that OOI accepted and handled refinery waste at the site, e.g.,</p> <ul style="list-style-type: none"> <li>• Waste fluids from member wells and refineries are piped to the sumps where any residual petroleum is separated and recovered.</li> <li>• October 27, 2000 (following shut-down of the OOI treatment plant in 1998) – Bob's Vacuum Service is recorded dumping waste at the site by a local resident; the driver "admitted" dumping and said the oil companies have permission to dump there. The resident further indicated that at the Long Beach Police Department determined that the driver's "paperwork was in order" and the driver's company has had a long standing contract and that dumping was going on ALL THIS TIME.</li> <li>• 1984 OOI investigation findings by the City of Long Beach Department of Health:             <ul style="list-style-type: none"> <li>• "OOI violated Section 25189.5 of the California Health and Safety Code in that they knowingly and</li> </ul> </li> </ul>	<p>Finding 2 of the CAO was modified to indicate that OOI accepted refinery wastes at its site, based on the information present in the US Geological Survey, 1953, Department of the Interior, "Native and Contaminated Ground Waters in the Long Beach-Santa Ana Area, California" U.S. Geological Survey, Water-Supply Paper 1136, Washington D.C., p 71-75.</p> <p>In evaluating the source of the discharge of wastes at the site, the Regional Board considered OOI's past operations at its site. Based on this evaluation, the Regional Board has ruled out other possible sources of the wastes at the site that is the subject of the CAO, including the operations of the OOI site.</p> <p>Review of groundwater monitoring data generated by OOI over the past ten years has shown that benzene impacts to groundwater consistently exist along the eastern boundary of the OOI property, with the maximum benzene concentrations aligned with the BP/ARCO pipelines beneath Golden Avenue. Furthermore, the "Focused Soil Data Summary" presented in Figures 3a, 3b, and 3c of BP's letter dated December 4, 2012, did not indicate significant benzene impacts in soil samples from any of the soil borings, other than at HA-5 located at the southwestern portion of the OOI site, where benzene was detected at concentrations of 1,400 µg/kg and 1,200 µg/kg, at depths of 5 feet and 10 feet, respectively, in 1991. This area was away from</p>

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

<p>intentionally disposed of hazardous waste, to wit: Oil waste, lead, and PCB at a point not authorized by this department.”</p> <ul style="list-style-type: none"> <li>• “OOI violated Section 25191 (d) (2) of the California Health and Safety Code in that they stored and treated the same hazardous wastes to wit: oil waste, lead, and PCB for a period greater than 96 hours without the required permits ... Oil Operators allowed hazardous wastes to be stored for a periods of up to one year without the required permits ... Furthermore they mix numerous waste streams at the facility without the required permits.”</li> </ul>	<p>the Golden Avenue pipeline corridor, and, therefore, it is unlikely to contribute to groundwater impacts beneath the eastern boundary of the OOI property adjacent to Lines 32, 34, and 252.</p> <p>Based upon the information presented in the CAO, the Regional Board has determined that Lines 32, 34, and 252 are the source of the waste discharged at the site.</p>
<p><u>Finding 6</u></p> <p>The LARWQCB has provided little information to BP regarding the operations at the OOI property. Publicly available files recently obtained by BP at the Long Beach Health Department indicate the following (in addition to OOI operations information previously provided by BP to the LARWQCB):</p> <ul style="list-style-type: none"> <li>• Sludge from sumps on the OOI operations was spread onto the northern OOI site. The excessive odors from this activity resulted in resident complaints. Measurements of ambient air by the Health Department recorded up to 50 ppmv volatile organic compounds (VOCs) in the neighborhood. Removal of sludge from the sump located near Brycon MW1 was reportedly spread on the northern OOI site (i.e., north of I-405).</li> </ul> <p>BP requests that the LARWQCB fully investigate the history, uses, and contributions of OOI operations to Site impacts and provide all available information to BP for use in preparation of a Conceptual Site Model and associated source identification required in the tentative CAO.</p>	<p>The Regional Board has already investigated the history, uses, and potential contributions of OOI operations to site impacts. As previously indicated, based on this investigation, the Regional Board has ruled out other possible sources of the wastes at the site that is the subject of the CAO, including the operations of the OOI site.</p> <p>The Regional Board is not required to provide information to BP regarding the operations at the OOI site. If BP seeks such information, it is incumbent on BP to request that information from the Regional Board. Such information is available for review by the public during regular business hours. In addition, any person may request Regional Board records by submitting a request pursuant to the California Public Records Act. The public is encouraged to contact the Regional Board and make requests for file reviews for any of our sites for which records are available. Hence, BP, or any other interested person, could have contacted the Regional Board at any time and requested access to the files concerning OOI's operations. Had BP done so, the Regional Board would have assisted BP in obtaining access to our records related to the OOI site. Thereafter, it would be BP's responsibility to review the Regional Board's records and use that information in its preparation of a Conceptual Site Model and associated source identification required in the CAO.</p> <p>The sludge and excessive odors noted by BP were a nuisance issue.</p>
<p>BP / 1.10</p>	

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

<p>BP / 1.11</p>	<p><u>Finding 7d</u></p> <p>Significant potential sources of benzene and other contaminants exist in the vicinity of 712 Baker Street other than the BP pipelines.</p> <ul style="list-style-type: none"> <li>• Seven pipelines owned by others have been identified along Golden Avenue and Baker Street. The LARWQCB has not provided information related to the uses, history of operation, release and repair history, etc. for these lines. Also, many other lines that could provide conduits for plume migration traverse the OOI site from the area north of Baker Street along Golden Avenue.</li> <li>• The LARWQCB has not considered the potential contribution of lines beneath Baker Street, indicating that the lines are "away from the primary area of concern along Golden Avenue." OOI reports present data showing detectable concentrations of dissolved phase petroleum hydrocarbon compounds in water samples from the well MW-3, which is part of the OOI site, as described in the tentative CAO. Well MW-3 is located approximately 50 feet from Baker Street.</li> <li>• In addition, substantial evidence from the California Environmental soil vapor study and other historical and forensics analysis demonstrates that deep impacts along Golden Avenue extend north of Baker Street and that the greatest surface impacts at the site are found in the vicinity of Baker Street. Methane data throughout OOI indicate contaminants likely originated on OOI property, with the highest concentrations north of Baker Street.</li> </ul>	<p>They are unrelated to the dissolved phase benzene impacts observed along the pipeline corridor beneath Golden Avenue and the eastern perimeter of the OOI site.</p>
<p>The Regional Board has investigated the uses, history of operation, and release and repair history for other pipelines in the vicinity of 712 Baker Street. Regional Board staff reviewed records from the State Fire Marshall's office and the City of Long Beach, Department of Public Works, to determine if there were any other pipelines along Baker Street and Golden Avenue and, if so, whether there were any documented releases from those pipelines. Regional Board staff also reviewed the records identified within Exhibit B of the CAO. While non-BP pipelines have operated and currently operate in the area, the only pipelines identified as carrying refined products are Lines 23, 34, and 252. Regional Board staff found no release records after completion of its file reviews; however, the lack of a release record does not mean releases did not occur. Finding 7d in the CAO addresses other pipelines in the subject area.</p> <p>The Regional Board has also considered the potential contribution of lines beneath Baker Street. Well MW-3 is 50 feet from Lines 32, 34, and 252, which convey or have conveyed refined products. MW-3 is also 50 feet from Golden Avenue beneath which these lines are present. The extent of impacts along Golden Avenue has not been defined laterally or vertically. The investigation of impacts has not been fully completed. If shallow impacts adjacent to Lines 32, 34, and 252 are demonstrated to be connected to deeper impacts, and those deeper impacts are determined to be from other sources, then the Regional Board will consider taking additional actions.</p> <p>The Regional Board is aware of the soil vapor study and groundwater impacts. The CAO is requiring assessment of impacts aligned with Lines 32, 34, and 252. If assessment of these impacts indicates that the impacts on the OOI property north of Baker Street are from a different source than Lines 32, 34, and/or 252, then the Regional Board will consider taking additional actions. As for the hydrocarbon impacts in groundwater on the OOI property north of Baker Street, the</p>	<p>The Regional Board has investigated the uses, history of operation, and release and repair history for other pipelines in the vicinity of 712 Baker Street. Regional Board staff reviewed records from the State Fire Marshall's office and the City of Long Beach, Department of Public Works, to determine if there were any other pipelines along Baker Street and Golden Avenue and, if so, whether there were any documented releases from those pipelines. Regional Board staff also reviewed the records identified within Exhibit B of the CAO. While non-BP pipelines have operated and currently operate in the area, the only pipelines identified as carrying refined products are Lines 23, 34, and 252. Regional Board staff found no release records after completion of its file reviews; however, the lack of a release record does not mean releases did not occur. Finding 7d in the CAO addresses other pipelines in the subject area.</p> <p>The Regional Board has also considered the potential contribution of lines beneath Baker Street. Well MW-3 is 50 feet from Lines 32, 34, and 252, which convey or have conveyed refined products. MW-3 is also 50 feet from Golden Avenue beneath which these lines are present. The extent of impacts along Golden Avenue has not been defined laterally or vertically. The investigation of impacts has not been fully completed. If shallow impacts adjacent to Lines 32, 34, and 252 are demonstrated to be connected to deeper impacts, and those deeper impacts are determined to be from other sources, then the Regional Board will consider taking additional actions.</p> <p>The Regional Board is aware of the soil vapor study and groundwater impacts. The CAO is requiring assessment of impacts aligned with Lines 32, 34, and 252. If assessment of these impacts indicates that the impacts on the OOI property north of Baker Street are from a different source than Lines 32, 34, and/or 252, then the Regional Board will consider taking additional actions. As for the hydrocarbon impacts in groundwater on the OOI property north of Baker Street, the</p>	

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

<p>BP / 1.12</p>	<p><u>Finding 7.e.i</u> Soil vapor concentrations increase with depth, including with AOC A, which suggests a deeper, separate source for the hydrocarbon impacts beneath the pipelines, and not a current shallow source such as the pipelines.</p>	<p>Regional Board suspects they originated from Lines 32, 34, and/or 252 in Golden Avenue because: (1) they have a similar composition as adjacent to Golden Avenue, and (2) the Regional Board is unaware of any soil data that indicates hydrocarbon impacts on the OOI property north of Baker Street have a trace to groundwater.</p>
<p>BP / 1.13</p>	<p><u>Finding 7.e.ii</u> AOC A is not located near two recent pipeline repair locations. The northerly asphalt patch is located approximately 250 feet north of 3742 Countryside Lane. Furthermore, the asphalt patches are not indicative of a pipeline release, and as previously documented, no "repairs" were made to ARCO lines. The patches are a result of preventive maintenance due to testing anomalies. In addition, field log records show no evidence of leaks during the excavations for maintenance.</p>	<p>The Regional Board is not suggesting there is a current shallow release source. Section A-A', Figure 6, in Brycon's report entitled "Report on Additional Site Characterization," dated September 30, 2011, shows that soil vapor concentrations increase to certain depths at some locations, and then decrease below those depths, as in CESV21 and CESV33. At these locations, the Regional Board interprets this pattern to likely represent an older near-surface release for which the center of mass has migrated down.</p>
<p>BP / 1.14</p>	<p><u>Finding 7.f.i</u> BP did not make the stated claim that subsurface samples lacked iso-octane and therefore did not originate from gasoline, as iterated in BP's December 4, 2012, letter. BP's previous statements regarding the lack of iso-octane were in reference to the soil vapor sample from VES-A, not the LNAPL sample collected from well Brycon-MW-1 (in Area AOC B).</p>	<p>Item 7.e.ii containing a reference to the asphalt patch locations and "repairs" associated with preventative maintenance has been removed from the CAO.</p> <p>The Regional Board notes that BP's comment in its December 4, 2012, letter regarding the absence of iso-octane indicators referenced a soil vapor sample. The Regional Board realizes that one sample was from soil vapor and the other from LNAPL and that they were collected from two different release areas of concern along Lines 32, 34, and 252. Nonetheless, the presence of LNAPL containing iso-octane adjacent to gasoline and/or refined product Lines 32, 34, and 252 – in any medium or location – suggests a gasoline release occurred from one or more of these lines in or near Golden Avenue. Finding 7.f.i.1 has been revised in the CAO.</p>
<p>BP / 1.15</p>	<p><u>Finding 7.f.iii</u></p>	<p>Finding 7.f.iii of the Tentative CAO has been deleted from the final</p>

Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064

	<p>The statement that the LNAPL lacked evidence of heavier hydrocarbons overstates Zymax's conclusions. Chemical fingerprint data do not show a consistent forensic signature, which would be expected if the only source of contaminants was a pipeline release. In addition, Zymax did not analyze the heavier carbon range, and, therefore, does not have the data to draw this conclusion. Analyses were limited to C3-C10 and oxygenates. Per Zymax, "There is not evidence of any heavier petroleum products in the sample. This could be confirmed by analysis in the C3-C44 carbon range."</p>	<p>CAO.</p>
<p>BP / 1.16</p>	<p><u>Finding 7.f.iv.</u></p> <p>It appears that the LARWQCB is using benzene as an indicator chemical for gasoline-sourced contamination. However, it is documented in several reports, including those footnoted below, that OOI influent and effluent contained benzene.</p>	<p>The Regional Board acknowledges that benzene likely existed within the crude oil production wastewater processed by OOI, adjacent to Lines 32, 34, and 252. However, in its investigation, the Regional Board also used other indicators, such as 1,2-DCA and iso-octane.</p>
<p>BP / 1.17</p>	<p><u>Finding 7.g.</u></p> <p>The leaded gasoline scavenger, 1,2-Dichloroethane (1,2-DCA), has not been detected in any sample locations except those on the OOI property. 1,2-DCA was not detected in any soil vapor or soil samples above 30 feet below ground surface (bgs). Higher concentrations of 1,2-DCA in groundwater were detected on the northern portion of the OOI property (i.e. north of Baker Street) away from the ARCO pipelines.</p>	<p>The highest 1,2-DCA groundwater detections were found within former wells 92-MW-4 and 92-MW-3, at maximum concentrations of 730 and 1,030 µg/L 1,2-DCA, respectively. These wells are on the OOI property, close to and downgradient of Lines 32, 34, and 252. The maximum 1,2-DCA concentrations detected on the northern portion of the OOI property (north of Baker Street) was 315 µg/L 1,2-DCA. Furthermore, there is no evidence of a 1,2-DCA track to groundwater in soil samples collected from the northern portion of the OOI property. The distribution of 1,2-DCA suggests that its source is from one or more releases in Golden Avenue and that 1,2-DCA migrated downgradient toward the northwest.</p>
<p>BP / 1.18</p>	<p><u>Finding 7.h.</u></p> <p>Benzene has been detected in groundwater on the OOI property, with concentrations increasing significantly along its eastern boundary after a shift in groundwater flow direction toward the southeast in 2005. This could suggest a source on the OOI property, not a source beneath Golden Avenue. In addition, iso-concentration maps of benzene and other compounds produced by Brycon are far-</p>	<p>The distribution of maximum benzene concentrations in groundwater has been generally consistent, adjacent to the pipeline corridor along Golden Avenue, regardless of the groundwater flow direction. Benzene exists in gasoline, which BP and ARCO transported in one or more Golden Avenue pipelines. Other indicators, such as 1,2-DCA and iso-octane, indicate a gasoline release in the vicinity of the Golden Avenue pipelines. When viewing groundwater data independent of contour maps provided to the Regional Board, the Board came to the</p>

## Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064

reaching and misleading (see for example Figure 5 of the October 15, 2012, Brycon quarterly groundwater monitoring letter).

In the Brycon 2006 October Groundwater Monitoring Report, Brycon noted "The concentration of benzene increased in ESE-MW1 relative to the April 2006 sampling event (from 1,800 µg/L to 2,600 µg/L). This is a fairly significant increase. In April 2005, the benzene level in this well was 1,400 µg/L and in October 2005, it was only 19 µg/L. The first large increase observed during recent monitoring events was in April 2005, which represents the first reported time that the change in gradient and flow direction from northwesterly to northeasterly was observed. The benzene levels measured in ESE-MW-1 appear to be related to water flow direction and elevation in this well, several other VOCs also increased in concentration during the recent (October 2006) monitoring event. These included 1,2-DCA, ethylbenzene, toluene and xylenes. In Emcon-MW-3, the VOCs did not change very significantly, however, more VOCs were detected in April 2006."

Also, in their 2006 report conclusions, Brycon noted the following: "this northeasterly flow direction may be responsible for the noticeable increase in benzene levels detected in Well ESE-MW1 in three out of the four monitoring events conducted since April 2005...the increase in benzene levels observed in Well ESE-MW1 seems to be related to the change in groundwater flow direction in which ESE-MW-1 now has a downgradient component relative to Basin 1. Although soil and sludge in Basin 1 was blended to facilitate bioremediation in recent years, seepage and partitioning of substances present in Basin 1 sludges may have occurred over numerous years in the past, impacting nearby shallow groundwater."

Further, the data provided to BP by the LARWQCB via reports uploaded to GeoTracker are insufficient to allow depictions of chemical iso-concentration lines east of the OOI property. The three wells along the eastern side of the OOI property are each situated

conclusion that the impacts along the eastern edge of the OOI property, adjacent to Golden Avenue, appear to originate within Golden Avenue.

The Regional Board interprets the 2005 to 2006 benzene concentration increases in ESE-MW1 to have been a result of benzene impacts moving downgradient in a northwesterly direction from Golden Avenue onto the OOI property. When the direction of groundwater flow shifted to being northeasterly, back toward Golden Avenue, these impacts were detected in ESE-MW1 location.

The Regional Board is not aware of any groundwater data that supports Basin 1 as a source for benzene detected in ESE-MW1. In fact, groundwater data in the Regional Board's files counter it. For example, September 2013 groundwater monitoring data from Brycon MW-2 contained 189 µg/L benzene. This well is located close to the northeast corner of Basin 1. Well ESE-MW1 contained 614 µg/L benzene during the September 2013 groundwater monitoring event. This well is located away from Basin 1, closer to Golden Avenue. If the increases of benzene in well ESE-MW1 in the 2005 to 2006 time frame had been from a Basin 1 source, the Regional Board would expect the benzene concentrations in Brycon MW-2 to be higher than or at least comparable to the benzene concentrations in ESE-MW1.

The Regional Board acknowledges that the extent of groundwater impacts within Golden Avenue and north of it remains unknown. Regional Board staff's interpretation of the groundwater data support the conclusion that benzene and other gasoline impacts appear to have originated in Golden Avenue, coincident with the location of Lines 32, 34, and 252.

The Regional Board also acknowledges that the potential for gasoline sources at the OOI property exists. A primary basis for naming BP, ARCO, and ARCO Terminal Services Corporation on the CAO is the distribution of impacts along the eastern edge of the OOI property, which is adjacent to Lines 32, 34, and 252 in Golden Avenue. If

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

	<p>approximately 500 feet apart, and there are no wells to the east that would allow the depiction of the contouring shown. Prior Brycon maps, which included more data, show distinct areas of contamination rather than a single continuous plume. Additionally, gasoline-range hydrocarbons have been detected on OOI's former northerly-most parcel (i.e. a current driving range located north of 405) in sump sludge 30 feet bgs, further indicating the potential contribution of gasoline compounds by OOI operations.</p>	<p>additional assessment indicates that the impacts aligned with Lines 32, 34, and 252 in Golden Avenue actually did originate from an OOI source or are commingled with impacts from an OOI source, the Regional Board will consider taking additional actions.</p>
<p>BP / 1.19</p>	<p><u>Finding 9a.</u> CHHSLs for vapor screening are applied in the top 5 feet – the 390 µg/L benzene vapor result was detected at a depth of 20 feet bgs. This is an incorrect and misleading application of the state standards and the CalEPA January 2005 guidance.</p>	<p>Finding 9 a. was modified in the CAO. The 390 µg/L benzene in soil vapor reference assumed to mean the 20-foot soil gas sample from CESV33. Note that the 5-foot soil vapor sample from CESV33 contained 0.83 µg/L benzene, which still exceeds both the residential and commercial CHHSLs for benzene, warranting concern and additional action.</p>
<p>BP / 1.20</p>	<p><u>Finding 10</u> No reference was made to the December 4, 2012 letter or the December 5, 2012 meeting and BP's anticipated response from the LARWQCB to discussions held during that meeting. • The LARWQCB states that "To date, the Regional Board has not received a revised work plan from BP." BP had not refused to submit a revised work plan, but understood that the LARWQCB would respond to the technical and legal bases presented at the December 5, 2012 meeting.</p>	<p>See responses to Comments 1.7 and 1.8.</p>
<p>BP / 1.21</p>	<p><u>Finding 21</u> " ...are or will pose a potential human health threat to occupants of the nearby Wrigley Heights residents through direct contact exposure to contaminated soil and/or groundwater..." Groundwater is located 30 to 50 feet bgs. Direct contact by residents is not currently a viable risk pathway. In addition, there have been no shallow soil impacts identified above 10 feet bgs in investigations by others along Golden Avenue. There is no currently defined risk due to direct contact with impacted soil along Golden Avenue.</p>	<p>At this time, a potential human health threat exists. The CAO requires an investigation so the petroleum impacts at and near Golden Avenue will be delineated. A Human Health Risk Assessment (HHRA) needs to be performed using current data to confirm whether there are any risks of concern at this point to the residents of the neighborhood. The HHRA should consider all possible pathways for exposure.</p> <p>Finding 21 in the CAO has been slightly modified in response to the comment.</p>
<p>BP / 1.22</p>	<p><u>Required Actions 3, Page 6.</u></p>	<p>The "Site" refers to impacts from Lines 32, 34, and/or 252, wherever those impacts may be determined to be present. This includes areas</p>

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

<p>where the waste was discharged, including areas where the waste has migrated. Until the extent of impacts from Lines 32, 34, and 252 are delineated, the Regional Board acknowledges that the extent of "the Site" remains largely undefined. If the Regional Board determines that impacts from sources other than Lines 32, 34, and 252 are commingled with impacts from these lines, the Regional Board will consider taking additional actions, such as amending the CAO with additional parties or issuing a separate order to other parties.</p>	<p>Completely delineate the extent of ... in soil, soil vapor, ... discharged at or from the Site." BP requests "the Site" be changed to "ARCO pipelines". ARCO has no liability for impacts by others, such as OOI and other pipelines in the Site.</p>	<p>BP / 1.23</p>
<p>The Regional Board concurs with the request for a sequence revision. Exhibit D to the CAO has been modified to require a work plan for a HHRA concurrent with the Master Work Plan. The due date for the submittal of the completed HHRA will be made when the work plan is approved by the Regional Board.</p> <p>The Regional Board concurs with the additional request for a sequence revision. Exhibit D has been modified to require preparation of the site conceptual model after implementation of the Master Work Plan. The Regional Board expects that a simple Site Conceptual Model will be incorporated into the Master Work Plan to put the Master Work Plan into context. A more detailed Site Conceptual Model can be submitted following implementation of the Master Work Plan.</p> <p>Comment noted. The Regional Board will determine which wells will be required for groundwater monitoring following the Board's review of the Master Work Plan, which should contain a section on proposed groundwater monitoring. Item 6 of Exhibit D has been modified to reflect this.</p> <p>Brycon corrected the error and uploaded the <i>Quarterly Monitoring Report, Soil Vapor Extraction</i>, dated April 15, 2013, to GeoTracker on June 3, 2013. Despite the error in mass recovery calculations, the soil vapor extraction (SVE) system was installed and is operated to mitigate soil vapor concentrations exceeding CHHSL values in the vicinity of</p>	<p>Exhibit D: Time Schedule</p> <ul style="list-style-type: none"> <li>BP requests a sequence revision: A human health risk assessment will be conducted following implementation of the Master Work Plan and evaluation of the data associated with the investigation required in the tentative CAO.</li> <li>BP requests an additional sequence revision: A conceptual site model will be prepared following implementation of the Master Work Plan and evaluation of the data associated with the investigation required in the tentative CAO.</li> <li>Groundwater monitoring – Monitoring wells to be sampled per this requirement will be identified in the Work Plan. ARCO will not be responsible for reporting of data collected by others (e.g., reporting on the monitoring period for January through June 2013 or thereafter depending upon the timing of issuance of the final CAO).</li> <li>IRAP – due to the egregious errors in Brycon's 2013 vapor extraction system monitoring report recently uploaded to GeoTracker, BP considers the basis for the system and its operation to be suspect. The errors overstate the benzene recovery, by a factor of at least several thousands. This is</li> </ul>	<p>BP / 1.23</p>
<p>where the waste was discharged, including areas where the waste has migrated. Until the extent of impacts from Lines 32, 34, and 252 are delineated, the Regional Board acknowledges that the extent of "the Site" remains largely undefined. If the Regional Board determines that impacts from sources other than Lines 32, 34, and 252 are commingled with impacts from these lines, the Regional Board will consider taking additional actions, such as amending the CAO with additional parties or issuing a separate order to other parties.</p>	<p>Completely delineate the extent of ... in soil, soil vapor, ... discharged at or from the Site." BP requests "the Site" be changed to "ARCO pipelines". ARCO has no liability for impacts by others, such as OOI and other pipelines in the Site.</p>	<p>BP / 1.23</p>

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

	<p>part of a pattern of errors in Brycon reports, as indicated to the LARWQCB during discussions and meetings in 2012. Vadose zone data along Golden Avenue support the low levels of benzene recovered by the OOI vapor extraction system. Following implementation of the Master Work Plan and evaluation of the data associated with the investigation required in the tentative CAO, BP will prepare a RAP if the data and human health risk assessment confirm that one is necessary.</p> <ul style="list-style-type: none"> <li>The schedule timeline is unrealistic. A Master Work Plan will be submitted to the LARWQCB by BP within six weeks of the issuance of the Final CAO.</li> </ul>	<p>residences. The Regional Board notes that the valve for VES Well A is not fully opened (it was opened only 25% as of May 2014) in order to keep influent concentrations below South Coast Air Quality Management District permit requirements. Since VES Well A has demonstrated higher vapor concentrations between the two active VES wells, it would be expected that more extraction from VES Well A would yield higher influent concentrations and extraction rates. Until assessment is completed and a human health risk assessment is performed that supports turning the soil vapor extraction system off, the Regional Board will require its continued operation.</p> <p>The Regional Board does not object to a six week period for submission of a Master Work Plan from the date that the final CAO is issued. Exhibit D has been modified to provide additional time.</p>
<p>BP / 1.24</p>	<p>The tentative CAO lacks a sufficient evidentiary basis that conforms to Water Code standards and recent case law. For the reasons set forth below, we urge the Board to rescind the Order and allow BP to conclude its response to the 13267 Order. Alternatively, we urge the Board to delay issuance of the order until BP obtains a State Board decision on the June 8, 2012 Petition.</p> <ul style="list-style-type: none"> <li>The tentative CAO repeats the evidentiary and legal flaws associated with the May 11, 2012 13267 Order. Water Code Section 13267 authorized the Regional Board to issue the 13267 Order to those who have discharged, or are suspected of having discharged, wastes. There was and continues to be a lack of evidence of that any BP line discharged gasoline in the vicinity of the Site. There is strong evidence showing BP has not caused or contributed to a release. BP has cooperated with every request and order from the LARWQCB thus far but would be forced again to petition the state board for review of any clean-up abatement order in this matter.</li> <li>A cleanup and abatement order may be issued only to a "person" who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or</li> </ul>	<p>The Regional Board disagrees with BP's comment that the CAO lacks a sufficient evidentiary basis that conforms to Water Code standards and case law. The Regional Board has sufficient evidence indicating that BP, ARCO, and ARCO Terminal Services Corporation are collectively responsible for the waste discharged at the site. This is due to their current and/or former ownership or their present and/or past operations of pipelines that transported refined products at the Site that resulted in the discharge of wastes. As previously indicated, the Regional Board has investigated and ruled out other possible sources of the wastes at the site, including the OOI site. Strong evidence indicates that a release(s) from Lines 32, 34, and/or 252 caused the discharge resulting in impacts. Further, the CAO conforms to the Water Code, case law, and State Water Resources Control Board (State Water Board) precedential orders and policies.</p> <p>As described in the findings of the CAO, BP, ARCO, and ARCO Terminal Services Corporation are subject to an order pursuant to Water Code section 13304 because they have caused or permitted waste, including volatile organic compounds (VOCs), to be discharged or deposited where the wastes are, or probably will be, discharged to waters of the state and has created, and continues to create, a condition of pollution or nuisance. BP misquotes and mischaracterizes <i>Redevelopment</i></p>

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

<p>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 of nuisance.” (Water Code &amp; 13304.) Section 13304 liability attaches only where a party “took affirmative steps directed towards the improper discharge” of waste or has either directly spilled or released the contaminants into the environment or affirmatively and knowingly caused or permitted the contamination to migrate. <i>Redevelopment Agency of the City of Stockton v. BSNF Railway Co.</i>, 643 F.3d 668, 674-674, 678 (9<sup>th</sup> Cir.2011) (applying the law of nuisance to Water Code 13304). Here, there is no evidence that a BP line in the vicinity of the Site “caused or permitted, causes or permits or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited.”</p> <ul style="list-style-type: none"> <li>• Based on the foregoing, the LARWQCB lacks a basis to name BP in a clean-up and abatement order.</li> <li>• Further, Resolution 92-49 requires that the LARWQCB use the most cost-effective methods for detecting contamination or pollution and ensuring clean up. The draft CAO is not a cost-effective means for many of the same reasons described in the June 8, 2012 Petition. It imposes unreasonable costs on BP where the evidence supports that parties other than BP should bear those costs.</li> <li>• In light of the foregoing, we urge the Board to rescind tentative CAO. Alternatively, we urge the Board to delay issuance of the order until BP obtains a State Board decision on the June 8, 2012 Petition.</li> </ul>	<p><i>Agency of the City of Stockton</i>. As an initial matter, the court in that case considered whether the appellant railroad companies were liable for contamination of property under the common law of nuisance or under the California Polanco Redevelopment Act. While the court looked, in part, to Water Code section 13304 in making that determination, that case did not concern issuance of a CAO as is the case here. Further, the quote cited by BP (which is from another case concerning the Polanco Redevelopment Act) is incomplete. The actual quote from the <i>Redevelopment Agency of the City of Stockton</i> case states that “[T]hose who took affirmative steps directed toward the improper discharge of [hazardous] wastes...may be liable under [section 13304]...”. <i>Id.</i>, 643 F.3d 678 (emphasis added). The court therefore did not determine that only those who took affirmative steps can be held liable. Even so, the facts of this matter are distinguishable from that case. Here, the Regional Board has determined that pipelines owned and/or operated by BP, ARCO, and ARCO Terminal Services Corporation released waste into the environment. Moreover, under precedential orders, the State Water Board has interpreted the term “discharge” to include not only an active, initial release, but also a passive migration of waste. The discharge continues as long as the pollutants remain in the soil and groundwater at the site. (See, e.g., State Water Board Order WQ.86-2 (<i>Zoecon Corporation</i>) finding that, because there was an actual movement of waste from soil to water on the site, a continuing discharge existed for which the current owner could be held responsible). Therefore, BP, ARCO, and ARCO Terminal Services Corporation are appropriately named as responsible parties in the CAO.</p> <p>The CAO is consistent with State Water Board Resolution No. 92-49. The Regional Board disagrees with BP that the CAO “imposes unreasonable costs on BP where the evidence supports that parties other than BP should bear those costs.” As previously indicated, the Regional Board has determined, based on evidence in its records, that BP, ARCO, and ARCO Terminal Services Corporation are the appropriate parties to assess and cleanup the wastes. In accordance</p>
--	---

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

with Resolution No. 92-49, the CAO provides a phased approach to site investigation and remediation, which may reduce overall costs. In addition, the parties to the CAO have the opportunity to select and propose cost-effective methods for detecting discharges and methods for cleaning up the wastes or abating the effects of the waste. Pursuant to Resolution No. 92-49, the Regional Board shall "concur with any investigative and cleanup and abatement proposal which the discharger demonstrates and the Regional Water Board finds to have a substantial likelihood to achieve compliance, within a reasonable time frame, with cleanup goals and objectives that implement the applicable Water Quality Control Plans and Policies adopted by the State Water Board and Regional Water Boards, and which implement permanent cleanup and abatement solutions which do not require ongoing maintenance, wherever feasible."

The Regional Board further disagrees that a delay in issuing the CAO is warranted. As indicated above, the Regional Board has sufficient information at this time indicating that pipelines owned and/or operated by BP, ARCO, and ARCO Terminal Services Corporation are collectively responsible for the waste discharged at the site. In addition, contrary to BP's assertion, BP has not "cooperated with every request and order from the [Regional Board] thus far." To date, the Regional Board has not received a revised workplan from BP pursuant to the May 11, 2012, Water Code section 13267 order. This is despite the fact that, on April 24, 2013, Regional Board staff notified BP that it was currently completing a tentative CAO that would be issued to BP and ARCO. BP has therefore had over one year since that notification to "conclude its response to the 13267 Order," which it has chosen not to do. Nevertheless, even though BP never concluded its response to the Water Code section 13267 order, additional site assessment and delineation of the extent of the wastes at the site is required by the CAO. Furthermore, on June 8, 2012, BP submitted a petition to the State Water Board challenging the Water Code section 13267 order. At that time, BP requested that the petition be held in abeyance to allow time to work with the Regional Board. To date, the petition remains in abeyance at BP's request, meaning that the State Water Board is not

**Response to Comments – Draft Cleanup and Abatement Order No. R4-2013-0064**

		<p>actively working on the petition. Had BP tried to obtain a State Water Board decision prior to issuance of the CAO, it should have requested that the petition be taken out of abeyance.</p>
--	--	---

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

CLEANUP AND ABATEMENT ORDER NO. R4-2013-0064  
REQUIRING

BP PIPELINES (NORTH AMERICA), INC., ATLANTIC RICHFIELD COMPANY,  
AND ARCO TERMINAL SERVICES CORPORATION

TO INVESTIGATE, MONITOR, CLEANUP, AND ABATE THE EFFECTS OF  
WASTE DISCHARGED TO WATERS OF THE STATE  
(PURSUANT TO CALIFORNIA WATER CODE SECTIONS 13304 AND 13267)

AT  
GOLDEN AVENUE  
BETWEEN BAKER STREET AND WEST WARDLOW ROAD  
LONG BEACH, CALIFORNIA 91750  
(SCP CASE NO. 0093A AND SITE ID NO. 2040420)

This Cleanup and Abatement Order No. R4-2013-0064 (Order) is issued to BP Pipelines (North America), Inc., Atlantic Richfield Company, and ARCO Terminal Services Corporation based on provisions of California Water Code sections 13304 and 13267, which authorizes the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) to issue a Cleanup and Abatement Order and require the submittal of technical and monitoring reports.

The Regional Board finds that:

BACKGROUND

1. **Dischargers:** BP Pipelines (North America), Inc. (BP), Atlantic Richfield Company (ARCO), and ARCO Terminal Services Corporation (ATSC) (hereinafter, collectively referred to as "Dischargers") are Responsible Parties (RPs) due to their or their subsidiaries:
  - (a) present and/or past ownership of pipelines located generally within Golden Avenue between Baker Street and Wardlow Road in Long Beach, California (hereinafter referred to as "the Site"), and/or
  - (b) present and/or past operations of the pipelines at the Site that resulted in the discharge of wastes, including volatile organic compounds (VOCs), particularly benzene and 1,2-dichloroethane (1,2-DCA), light non-aqueous phase liquids (LNAPL), and other waste constituents of concern to the environment.

As detailed in this Order, the Dischargers have caused or permitted waste to be discharged or deposited where it is, or probably will be discharged into the waters of the State which creates, or threatens to create, a condition of pollution or nuisance.

2. **Location:** The pipelines at the Site are located generally within Golden Avenue between Baker Street and Wardlow Road in Long Beach, California. Exhibit A, Figure 1, Site Location Map, attached hereto and incorporated herein by reference, depicts the location of the Site. Additionally, Exhibit A, Figure 2, Site Map, also attached hereto and incorporated herein by reference, depicts the Site and the surrounding area. A residential neighborhood, known as Wrigley Heights Community, is located east of Golden Avenue and the pipelines. Adjacent to the west of Golden Avenue and the pipelines is the vacant Oil Operator's Inc. (OOI) site, which was formerly used to treat production brines, containing water and crude oil, recovered during oil production since 1926. OOI also accepted refinery wastes. The southern portion of the pipeline run, north of Wardlow Road, includes Wrigley Heights Dog Park. The area north of Baker Street includes a portion of the former OOI site and the newly-constructed Baker Street Park.
3. **Groundwater Basin:** The Site lies within the West Coast Basin of the Los Angeles Coastal Plain Groundwater Basin. The alluvial sediments within the Central Basin are an important source of groundwater. As set forth in the *Water Quality Control Plan for the Los Angeles Region (Basin Plan)*, which was adopted on June 13, 1994, the Regional Board has designated beneficial uses for groundwater, including municipal (MUN), industrial (IND), process (PROC), and agricultural supply (AGR) uses in the Central Basin, and has established water quality objectives for the protection of these beneficial uses.

#### SITE HISTORY

4. **Site Description and Activities:** The Site is a public street owned by the City of Long Beach. The Site includes pipelines (Line 32, Line 34, and Line 252) owned and/or operated by the Dischargers generally within Golden Avenue between Baker Street and Wardlow Road in Long Beach. According to pipeline inventory records provided by the Dischargers, Lines 32 and 34 have been operational since 1922 and 1927, respectively. ATSC has owned Lines 32 and 34 since 1988. Lines 32 and 34 are both currently active. Line 252 has been inactive since 1995.

#### *Pipeline Ownership Timeline*

The historical pipeline ownership is summarized in the tables and text below. This information was obtained from pipeline inventory records provided by the Dischargers and from Regional Board discussions with personnel representing the Dischargers.

**Table 1 - Ownership History for Line 32**

Pipeline Owner	Years of Ownership
Union Oil	1922 - 1929
Pan American Petroleum	1929 - 1937
Richfield	1937 - 1966
ARCO	1966 - 1988
ATSC	1988 - May 31, 2013
Tesoro <sup>1</sup>	June 1, 2013 - Present

**Table 2 - Ownership History for Line 34**

Pipeline Owner	Years of Ownership
Richfield	1927 - 1966
ARCO	1966 - 1988
ATSC	1988 - May 31, 2013
Tesoro	June 1, 2013 - Present

**Table 3 - Ownership History for Line 252**

Pipeline Owner	Years of Ownership
ARCO	1945 or prior to May 31, 2013
Tesoro	June 1, 2013 - Present

5. **Chemical Usage:** Based on information provided by the Dischargers and other available records, Lines 32, 34, and 252 collectively transported crude oil, dark refined products, other refined products including gasoline and diesel fuel, wastewater, and oily water. More detailed information on which pipeline transported specific materials and the sources of this information is presented in Exhibit B, attached hereto and incorporated herein by reference.

#### **EVIDENCE OF WASTE DISCHARGES AND BASIS FOR SECTION 13304 ORDER**

6. **Waste Discharges:** Environmental investigations have been conducted at the adjacent OOI site since the early 1980s. The OOI site is situated west of Golden Avenue, adjacent to Lines 32, 34, and

<sup>1</sup> In a letter dated July 24, 2013, Tesoro Refining & Marketing Company LLC (Tesoro) notified the Regional Board that: "responsibility for the [Golden Avenue, Long Beach, California] asset has been transferred from [ATSC] to Tesoro [], effective June 1, 2013. This transfer is consistent with terms of the property sale by which Tesoro assumed responsibility for further assessment and remediation activities associated with the subject asset, including all permits, performance bonds, agency oversight fees, etc." The Regional Board understands this means that, as of June 1, 2013, Tesoro is the current owner of Lines 32, 34, and 252. The Regional Board is not including Tesoro as a responsible party in this Order at this time because the active releases from Lines 32, 34, and 252 that resulted in the discharge of waste to waters of the state occurred prior to June 1, 2013. Based on current information, the Regional Board does not believe any active discharges from these pipelines continued on or after June 1, 2013.

252. These investigations involved soil vapor surveys, soil borings for soil sampling, and groundwater monitoring well installations for groundwater sampling. The results of those investigations indicate that there were waste discharges to the soil and groundwater at the Site. Elevated concentrations of benzene and other hydrocarbons are present in soil vapor beneath the pipelines and nearby areas, including beneath Golden Avenue and portions of the residential neighborhood on the east side of Golden Avenue, known as the Wrigley Heights Community. In addition, groundwater is impacted with LNAPL; benzene; 1,2-DCA; iso-octane; and other hydrocarbons. Upon review of available subsurface data, the Regional Board has determined that the source(s) of the hydrocarbon vapors (primarily benzene) and impacts to groundwater (primarily benzene and 1,2-DCA) that have been detected under the pipelines in Golden Avenue, Wrigley Heights residences, and the OOI site are the pipelines owned and/or operated by the Dischargers.

**7. Reasons Why the Dischargers are Responsible Parties for the Waste Discharges:**

- a. ATSC owned Line 32. BP operated Line 32 generally within Golden Avenue for transport of crude oil and refined dark product.
- b. ATSC owned Line 34. BP operated Line 34 generally within Golden Avenue for transport of diesel and other refined products, including gasoline.
  - i. A 1945 (original drawing date) ARCO pipeline map identifies segments of Line 34 beneath Golden Avenue as having been replaced. The reason for the pipeline replacement is unknown.
- c. ARCO owned Line 252. BP operated Line 252 generally within Golden Avenue for the transport of gasoline and waste water.
  - i. A 1945 (original drawing date) ARCO pipeline map identifies segments of Line 252 pipe where the installation of a 4-inch pipe inside an existing 6-inch pipe occurred along Baker Street and replacement beneath Golden Avenue. The reasons for the pipeline replacements are unknown.
- d. While other companies' pipelines have operated and currently operate in the area of the Site, the only pipelines identified as carrying refined products are those pipelines owned and/or operated by the Dischargers. Most of the other pipelines are located in Baker Street, away from the primary area of concern along Golden Avenue.
- e. OOI soil vapor data under Golden Avenue indicates a track to shallow soil for benzene near Lines 32, 34, and 252, which the Regional Board has identified as Area of Concern (AOC) "A."
  - i. AOC A is located along the stretch of Lines 32, 34, and 252 in Golden Avenue, approximately across the street from (west of) 3743 Countryside Lane.
- f. A LNAPL product sample collected from Brycon-MW1 (identified as AOC B), near the pipelines toward the southern portion of the OOI property, had indicators of a gasoline source.

- i. The sample contained 2,2,4-trimethylpentane and other trimethylpentanes (iso-octane), which are components of gasoline.
    - 1) BP previously asserted to the Regional Board that subsurface soil gas samples lacked iso-octane. Subsequent data from the LNAPL sample collected from Brycon-MW1 indicates that iso-octane is present, which indicates that there is at least one gasoline source.
  - ii. The sample contained high concentrations of the n-alkanes, heptane, octane, nonane, and decane. Historic leaded gasolines with high naphtha contents contained elevated n-alkane concentrations. The presence of high n-alkane concentrations suggests that this product may represent an old leaded gasoline.
  - iii. The only known source(s) of gasoline in the area of the Site are the pipelines owned and/or operated by the Dischargers.
- g. 1,2-DCA is a lead scavenger that was historically added to leaded gasoline to prevent buildup of lead oxide deposits within internal combustion engines. 1,2-DCA has been detected along the pipelines at the Site in Golden Avenue.
- i. The only known source(s) of gasoline in the area are the pipelines owned and/or operated by the Dischargers.
  - h. Benzene impacts to groundwater exist, with the maximum benzene concentrations aligned with the pipelines in Golden Avenue that are owned and/or operated by the Dischargers. Benzene exists in gasoline, which the Dischargers transported in their Lines 34 and 252, and possibly in Line 32.

Based upon the distribution of maximum benzene concentrations below the pipelines owned and/or operated by the Dischargers; a similar distribution of 1,2-DCA from a gasoline source along the pipelines; the presence of iso-octane and n-alkanes in LNAPL indicating a gasoline source adjacent to the pipelines; and a lack of evidence pointing to heavier-end hydrocarbons indicative of a crude oil source (in Brycon-MW1), substantial evidence indicates that BP, ARCO, and ATSC are dischargers and, therefore, Responsible Parties for the waste discharges.

8. **Source Elimination and Remediation Status:** No soil or groundwater cleanup has been implemented at the Site by the Dischargers.

OOI has operated a soil vapor extraction (SVE) system to mitigate resident and Regional Board concerns about soil vapor intrusion to nearby residential structures. When it became clear to the Regional Board that the impacts the SVE system is intended to mitigate resulted from discharges from pipelines owned and/or operated by the Dischargers, and not the OOI site, the Regional Board requested that BP take over responsibility for the interim remedial action and operate the existing SVE system. BP declined, claiming that: (1) the release is not BP's responsibility, (2) BP will not operate a SVE system owned by another company, and (3) full assessment should be performed before any remediation takes place.

9. **Summary of Findings from Site Investigations:** Regional Board staff has reviewed and evaluated technical reports and records pertaining to the Site history and the discharge, detection, and distribution of wastes at the Site and the Site vicinity. Elevated levels of benzene; 1,2-DCA; Iso-octane; and other hydrocarbons have been detected in the soil vapor and groundwater beneath the Site.
- a. Benzene has been detected at up to 390 µg/L in soil vapor at 20 feet in soil vapor probe CESV33. The 5-foot soil vapor sample from CESV33 contained 0.83 µg/L, which exceeds the residential California Human Health Screening Level (CHHSL) of 0.0362 µg/L. Benzene has been detected in groundwater up to 2,600 µg/L, exceeding the California Maximum Contaminant Level (MCL) of 1 µg/L.
  - b. 1,2-DCA has been detected in groundwater up to 2,600 µg/L, exceeding the California MCL of 0.5 µg/L.
  - c. LNAPL has been detected during groundwater sampling in the vicinity of the Discharger's pipelines.

The Board's findings based on the review of the reports and records available, which have been explained in Finding 7, confirm that the Dischargers are responsible for the discharge of waste beneath Lines 32, 34, and 252 and nearby areas, including beneath Golden Avenue, beneath the former OOI property adjacent to Golden Avenue, and portions of the residential neighborhood on the east side of Golden Avenue, known as the Wrigley Heights Community.

10. **Regulatory Status:** On January 13, 2012, the Regional Board issued BP and ARCO Investigative Order No. R4-2012-0009, which required submittal of a technical report on pipeline inventory pursuant to California Water Code section 13267. BP submitted a pipeline inventory on March 8, 2012. BP later submitted addendums to its pipeline inventory on September 12, 2012, and November 15, 2012.

On May 11, 2012, the Regional Board issued BP and ARCO Investigative Order No. R4-2012-0085, which required submittal of a work plan for soil and soil vapor investigations pursuant to California Water Code section 13267. In response, BP submitted an investigation work plan (Work Plan #1) on July 11, 2012. The Regional Board determined that Work Plan #1 was deficient, which was explained to BP during a meeting on August 9, 2012 and subsequent telephone conversations. In response to Regional Board feedback that Work Plan #1 was deficient, and as a follow-up to the meeting held on August 9, 2012, BP submitted a revised investigation work plan (Work Plan #2) on September 12, 2012. The Regional Board also determined that Work Plan #2 was deficient. Conference calls were held between the Regional Board and BP on October 18, 2012, November 1, 2012, and November 7, 2012, to discuss the deficiencies in the work plans. Also discussed during these calls was the need for BP to submit a revised work plan to address the Regional Board's requirements. In addition, during the November 7, 2012, conference call between the Regional Board and BP, BP stated that it would submit a revised work plan to the Regional Board by November 15, 2012. On November 20, 2012, the Regional Board provided BP with a written response to Work Plan #1 and Work Plan #2 explaining the deficiencies of each work plan.

BP did not submit a revised work plan. Instead, BP presented the Regional Board with correspondence dated December 4, 2012, and met with Regional Board staff on December 5, 2012, to present BP's view of legal and technical issues. During the meeting on December 5, 2012, Regional Board staff verbally responded to many of BP's statements and evaluations. On April 24, 2013, Regional Board staff responded to BP's December 4, 2012, letter indicating that it had reviewed the information presented by BP and generally disagreed with the assertions and technical evidence in that letter. In addition, in its letter, Regional Board staff provided notice to BP that it was currently completing a tentative cleanup and abatement order that would be issued to BP and ARCO.

On April 26, 2013, Regional Board staff provided the Dischargers and interested persons notice and opportunity to comment on Tentative Cleanup and Abatement Order No. R4-2013-0064. BP submitted written comments on May 28, 2013. The Regional Board has considered and responded to those written comments.

To date, the Regional Board has not received a revised work plan from BP.

11. **Impairment of Drinking Water Wells:** The Regional Board has the authority to require the Dischargers and other dischargers to pay for or provide uninterrupted replacement water service to each affected public water supplier or private well owner in accordance with California Water Code section 13304.
12. **Sources of Information:** The sources for the evidence summarized above include but are not limited to: reports and other documentation in Regional Board files, telephone calls and e-mail communication with responsible parties, their attorneys and consultants, and Site visits.

#### AUTHORITY - LEGAL REQUIREMENTS

13. Section 13304, subdivision (a), of the Water Code provides that:

*"Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any 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, shall upon order of the regional board cleanup the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts. Upon failure of any person to comply with the cleanup and abatement order, the Attorney General, at the request of the regional board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant."*

14. Section 13304, subdivision (c)(1), of the California Water Code provides that:

*"... the person or persons who discharged the waste, discharges the waste, or threatened to cause or permit the discharge of the waste within the meaning of subdivision (a), are liable to that*

*government agency to the extent of the reasonable costs actually incurred in cleaning up the waste, abating the effects of the waste, supervising cleanup or abatement activities, or taking other remedial actions. . ."*

15. Section 13267, subdivision (b)(1), of the California Water Code provides that:

*"In conducting an investigation..., the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or, discharging, or who proposes to discharge waste within its region . . . shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*

16. The State Water Resources Control Board (hereafter State Water Board) has adopted Resolution No. 92-49, the *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*. This Policy sets forth the policies and procedures to be used during an investigation and cleanup of a polluted site and requires that cleanup levels be consistent with State Water Board Resolution 68-16, the *Statement of Policy With Respect to Maintaining High Quality of Waters in California*. Resolution 92-49 and the Basin Plan establish the cleanup levels to be achieved. Resolution 92-49 requires the waste to be cleaned up to background, or if that is not reasonable, to an alternative level that is the most stringent level that is economically and technologically feasible in accordance with Title 23, California Code of Regulations (CCR), section 2550.4. Any alternative cleanup level to background must: (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of such water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and Policies of the State Water Board.
17. The Regional Board adopted the Basin Plan, which identifies beneficial uses and establishes water quality objectives to protect those uses. The Site overlies groundwater within the West Coast Basin of the Los Angeles Coastal Groundwater Basin. The beneficial uses of the groundwater beneath the Site includes municipal (MUN), industrial (IND), process (PROC), and agricultural supply (AGR) uses in the Central Basin. Water quality objectives (WQOs) that apply to the groundwater at the Site include the California MCLs. The concentrations of benzene in the groundwater beneath the Site exceed the WQOs for the waste. The exceedance of applicable water quality objectives in the Basin Plan constitutes pollution, as defined in California Water Code section 13050, subdivision (1)(1). The wastes detected in groundwater, soil matrix, and soil vapor at the Site threaten to cause pollution, including contamination, and nuisance.
18. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring dischargers to clean up the groundwater to meet drinking water standards (e.g., MCLs designed to protect human health and ensure that water is safe for domestic use).

#### DISCHARGER LIABILITY

19. VOCs, including benzene and 1,2-dichloroethane, and other waste constituents discharged at the Site constitute "waste" as defined in California Water Code section 13050, subdivision (d).
20. As described in Findings of this Order, the Dischargers are subject to an order pursuant to California Water Code section 13304 because the Dischargers have caused or permitted waste, including VOCs, to be discharged or deposited where the wastes are, or probably will be, discharged to waters of the state and has created, and continues to threaten to create, a condition of pollution or nuisance. The condition of pollution is a priority violation and issuance or adoption of a cleanup and abatement order pursuant to California Water Code section 13304 is appropriate and consistent with policies of the Regional Board and State Board.
21. Due to the activities described in this Order, the Dischargers have caused or permitted waste, including VOCs, particularly benzene, to be discharged or deposited where the wastes pose, or may pose, a human health threat to occupants of the nearby Wrigley Heights residents through direct contact exposure to contaminated soil and/or groundwater or through vapor intrusion into indoor air. The Dischargers, as the current or former owners and/or operators of Lines 32, 34, and 252, are responsible for complying with this Order.
22. This Order requires investigation and cleanup of the Site in compliance with the California Water Code, the applicable Basin Plan, State Water Board Resolution 92-49, and other applicable plans, policies, and regulations.
23. Substantial evidence indicates that the Dischargers caused or permitted waste to be discharged into waters of the state and are therefore appropriately named as RPs in this Order. The Regional Board will continue to investigate whether additional potentially responsible parties (PRPs) caused or permitted the discharge of waste at the Site and whether these or other persons should be named as additional responsible parties to this Order. The Regional Board may amend this Order or issue a separate order or orders in the future as a result of this investigation and as more information becomes available. Although investigation concerning additional PRPs is ongoing, the Regional Board desires to issue this Order as waiting will only delay remediation of the Site.
24. Pursuant to California Water Code section 13267, this Order requires the Dischargers to submit technical or monitoring reports in accordance with a groundwater monitoring program. The Dischargers are required to submit the reports because, as described in the Findings in this Order, existing data and information indicate that waste was discharged at the Site from pipelines that are owned and/or operated by the Dischargers. The groundwater monitoring program required by this Order is necessary to assure compliance with section 13304 of the California Water Code and State Water Board Resolution 92-49, including to adequately cleanup the Site to protect beneficial uses of waters of the state, to protect against nuisance, and to protect human health and the environment.
25. Issuance of this Order is being taken for the protection of the environment and as such is exempt from provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) in accordance with California Code of Regulations, title 14, sections 15061, subdivision (b)(3), 15306, 15307, 15308, and 15321. This Order generally requires the Dischargers to submit plans for approval prior to implementation of cleanup activities at the Site. Mere

submittal of plans is exempt from CEQA as submittal will not cause a direct or indirect physical change in the environment and/or is an activity that cannot possibly have a significant effect on the environment. CEQA review at this time would be premature and speculative, as there is simply not enough information concerning the Dischargers' proposed remedial activities and possible associated environmental impacts. If the Regional Board determines that implementation of any plan required by this Order will have a significant effect on the environment, the Regional Board will conduct the necessary and appropriate environmental review prior to Executive Officer's approval of the applicable plan.

26. Pursuant to section 13304 of the California Water Code, the Regional Board may seek reimbursement for all reasonable costs to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action.
28. Any person aggrieved by this action of the Regional Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:  
[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)  
or will be provided upon request.

#### REQUIRED ACTIONS

THEREFORE, IT IS HEREBY ORDERED, pursuant to sections 13304 and 13267 of the California Water Code, that the Dischargers shall investigate, monitor, cleanup the waste, and abate the effects of the waste forthwith discharged, or discharging, at or from the Site. "Forthwith" means as soon as reasonably possible, but in any event no later than the compliance dates specified in Exhibit D. More specifically, the Dischargers shall:

1. **Complete Interim Remedial Action Plan:** Prepare and submit an Interim Remedial Action Plan (IRAP) to mitigate accumulated benzene vapors in soil beneath the Wrigley Heights residential neighborhood. The IRAP shall include proposed techniques to accomplish uninterrupted<sup>2</sup> soil vapor intrusion mitigation. The IRAP shall include a proposed schedule both for implementation of the IRAP and for periodic reporting on IRAP progress. It shall also include a plan for compliance with the public participation requirements of California Water Code section 13307.5.

Upon approval of the IRAP by the Regional Board Executive Officer, the Dischargers shall implement the IRAP and report progress in accordance with the approved IRAP schedule.

2. **Develop and Update a Site Conceptual Model:** Prepare and submit a revised 3-dimensional illustration constituting a Site Conceptual Model (SCM). The SCM shall include a written

<sup>2</sup> OOI is currently performing soil vapor extraction to achieve soil vapor intrusion mitigation to Wrigley Heights residents. It is the Regional Board's intent that the Dischargers accomplish the interim remedial action task without interrupting OOI's soil vapor extraction activities.

presentation with graphic illustrations of the release scenario(s) and the distribution of wastes from the Site and vicinity. The SCM shall be constructed based upon actual data collected from the Site and any other relevant nearby sites that add to the accuracy of the SCM.

- a. SCMs shall be submitted using existing data. At minimum, a SCM shall include information about:
  - i. The Site-specific hydrogeology and hydrostratigraphy with verified field data;
  - ii. The current groundwater monitoring network with screened intervals;
  - iii. The location of all water supply wells within one mile of the Site as well as other receptors that may be affected by the discharge and migration of waste constituents to the subsurface environment; and
  - iv. The lateral and vertical extent of each chemical of concern in groundwater.

The SCM shall be updated periodically as new information becomes available. Updates to the SCM shall be included in all future technical reports submitted.

3. **Complete Site Assessment and Delineation of Extent of Wastes:** Completely delineate the extent of petroleum hydrocarbons and other constituents of concern (primarily LNAPL; benzene; and 1,2-DCA) in soil, soil vapor, and groundwater discharged at or from the Site.

- a. A Master Work Plan shall be prepared and submitted to the Regional Board Executive Officer to provide for full assessment.
  - i. The initial Work Plan shall be a Master Work Plan that describes proposed general assessment techniques and initial sampling locations.
    1. Subsequent work plans, if necessary, may propose additional sampling locations, referencing the methodologies within the Master Work Plan. This structure is intended to streamline work plan preparation and review efforts.
    2. The Master Work Plan and any subsequent work plans shall include a proposed schedule for completing proposed work.
    3. Proposed initial sampling locations shall be provided with the Master Work Plan.
  - ii. Delineation shall include adequate lateral (including off-Site) delineation and vertical delineation of waste constituents such that a complete 3-dimensional SCM can be generated for impacts to the Site.
- b. Additional work plans may be required if delineation efforts result in multiple iterations of work being necessary to complete full delineation.
- c. Upon approval by the Regional Board Executive Officer, the Dischargers shall implement the

Master Work Plan and report results in accordance with the approved work plan schedule.

4. **Prepare a Human Health Risk Assessment:** Prepare a quantitative, site-specific human health risk assessment (HHRA) to evaluate existing and future potential risks to human health from all wastes detected in the soil matrix, soil vapor, and groundwater at the Site through all potential exposure pathways, applying existing regulatory human health screening levels and/or acceptable risk assessment models.

Existing soil vapor data collected during various site assessments conducted at the Site are not usable for the human health risk assessment because of temporal variation of the concentrations of waste constituents in the soil vapor phase. Therefore, the Dischargers shall submit a work plan for the collection of sufficient data to enable completion of an HHRA. This HHRA work plan shall include proposed methods for preparing the HHRA and a proposed schedule both for data collection and HHRA preparation.

Upon approval by the Regional Board Executive Officer, the Dischargers shall implement the HHRA Work Plan and report results in accordance with the approved work plan schedule.

5. **Conduct Remedial Action:** Initiate a phased cleanup and abatement program for the cleanup of any remaining wastes in soil, soil vapor, and groundwater, and the abatement of threats to beneficial uses of water and removal of sources of waste as highest priority. Specifically, the Dischargers shall:
  - a. Develop and submit a comprehensive Remedial Action Plan (RAP) for cleanup of waste in soil matrix, soil vapor, and groundwater at and originating from the Site, and abatement of the effects of the wastes released to the environment, and submit it for Regional Board review and approval. The RAP shall include, at a minimum:
    - i. A description and evaluation of the effectiveness of proposed and alternative remediation options.
    - ii. A description of any pilot projects intended to be implemented.
    - iii. A program for preventing the spread of existing waste constituents in groundwater.
    - iv. A program to initiate remediation of off-site impact of petroleum constituents (including LNAPL; benzene; and 1,2-DCA), if applicable.
    - v. Proposed cleanup goals with a protocol and schedule to reach them. The following information shall be considered when establishing preliminary cleanup goals.
      1. Preliminary cleanup goals for soil and groundwater shall be in compliance with State Water Board Resolution 92-49 ("*Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*"). Section III.G of Resolution 92-49 requires cleanup to background, unless that is not reasonable. Alternative cleanup levels to background must comply with section 2550.4 of Title 23 of the California Code of Regulations, and be consistent with maximum benefit to the people of the state, protect beneficial uses, and result in compliance with the Basin

Plan. Alternative cleanup levels for groundwater shall not exceed water quality objectives in the Basin Plan, including California's MCLs and Notification Levels for drinking water as established by the State Department of Public Health. Alternative cleanup levels for soil and soil vapor shall not exceed levels that will result in groundwater exceeding water quality objectives in the Basin Plan, including California's MCLs and Notification Levels for drinking water as established by the State Department of Public Health.

2. Soil cleanup levels set forth in the Regional Board's Interim Site Assessment and Cleanup Guidebook, May 1996.
  3. Human health protection levels set forth in the current United States Environmental Protection Agency (USEPA) Region IX's Regional Screening Levels (RSLs).
  4. Protection from vapor intrusion and protection of indoor air quality based on the California Environmental Protection Agency's January 2005 (or later version) Use of Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties. Soil vapor sampling requirements are stated in the Department of Toxic Substances Control (DTSC) and Regional Board April 2012 *Advisory - Active Soil Gas Investigations*, and the DTSC October 2011 *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*.
  5. Groundwater cleanup goals shall not exceed applicable water quality objectives or criteria necessary to protect the beneficial uses, including the Regional Board's Basin Plan water quality objectives (e.g., California's MCLs), Notification Levels for drinking water as established by the State Department of Public Health, State Water Board Ocean Plan water quality objectives, and the California Toxic Rule water quality criteria, at a point of compliance approved by the Regional Board.
- vi. A plan for compliance with the public participation requirements of California Water Code section 13307.5.
- b. Prepare and submit quarterly remediation progress reports to this Regional Board. The remediation progress reports shall document all performance data associated with the remediation systems implemented. Following one year of remediation activities, a request may be submitted to the Regional Board to reduce the reporting frequency to a semi-annual schedule.
    - i. Reports shall meet the requirements set forth in Exhibit C, the Monitoring and Reporting Program, attached hereto and incorporated herein by reference.
  - c. Upon approval by the Regional Board Executive Officer, the Dischargers shall implement the RAP and report results in accordance with the approved work plan schedule.
  - d. Revisions to the RAP or additional RAPs may be required by the Regional Board if the implemented measure does not achieve all Site cleanup goals.

The Regional Board will establish due dates for the RAP and remediation progress reports after sufficient assessment has been performed to enable a RAP to be prepared.

6. **Conduct Groundwater Monitoring:** Pursuant to section 1367 of the California Water Code, the Dischargers shall initiate a groundwater monitoring program as set forth in Exhibit C, the Monitoring and Reporting Program.
7. **Time Schedule:** The Dischargers shall submit all required work plans and reports and complete work within the time schedule in any approved work plan or RAP and the time schedule listed in Exhibit D, attached hereto and incorporated herein by reference. Exhibit D may be revised by the Executive Officer without revising the substantive requirements of this Order.
8. The Regional Board's authorized representative(s) shall be allowed:
  - a. Entry upon premises where a regulated facility or activity is located, conducted, or where records are stored, under the conditions of this Order;
  - b. Access to copy any records that are maintained under the conditions of this Order;
  - c. Access to inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
  - d. The right to photograph, sample, and monitor the Site for the purpose of ensuring compliance with this Order, or as otherwise authorized by the California Water Code.
9. **Contractor/Consultant Qualification:** As required by sections 6735, 7835, and 7835.1 of the California Business and Professions Code, all reports shall be prepared by, or under the supervision of, a California registered professional engineer or geologist and signed by the registered professional. All technical reports submitted by the Dischargers shall include a statement signed by the authorized representative certifying under penalty of law that the representative has examined and is familiar with the report and that to his knowledge, the report is true, complete, and accurate. All technical documents shall be signed by and stamped with the seal of the above-mentioned qualified professionals that reflects a license expiration date.
10. The Dischargers shall submit a 30-day advance notice to the Regional Board of any planned changes in name, ownership, or control of the Site and shall provide a 30-day advance notice of any planned physical changes to the Site that may affect compliance with this Order. In the event of a change in ownership or operator, the Dischargers also shall provide a 30-day advance notice, by letter, to the succeeding owner/operator of the existence of this Order, and shall submit a copy of this advance notice to the Regional Board.
11. Abandonment of any groundwater well(s) at the Site must be approved by and reported to the Regional Board at least 30 days in advance. Any groundwater wells removed must be replaced within a reasonable time, at a location approved by the Regional Board. With written justification, the Regional Board may approve the abandonment of groundwater wells without replacement. When a well is removed, all work shall be completed in accordance with California Department of Water Resources Bulletin 74-90, "California Well Standards," Monitoring Well Standards Chapter, Part III, Sections 16-19.

12. In the event compliance cannot be achieved within the terms of this Order, the Discharger has the opportunity to request, in writing, an extension of the time specified. The extension request shall include an explanation why the specified date could not or will not be met and justification for the requested period of extension. Any extension request shall be submitted as soon as the situation is recognized and no later than the compliance date. Extension requests not approved in writing with reference to this Order are denied.
13. Reference herein to determinations and considerations to be made by the Regional Board regarding the terms of the Order shall be made by the Executive Officer or his/her designee. Decisions and directives made by the Executive Officer in regards to this Order shall be as if made by the Regional Board.
14. The Regional Board, through its Executive Officer or other delegate, may revise this Order as additional information becomes available. Upon request by the Discharger, and for good cause shown, the Executive Officer may defer, delete or extend the date of compliance for any action required of the Discharger under this Order. The authority of the Regional Board, as contained in the California Water Code, to order investigation and cleanup, in addition to that described herein, is in no way limited by this Order.
15. This Order is not intended to permit or allow the Dischargers to cease any work required by any other Order issued by this Regional Board, nor shall it be used as a reason to stop or redirect any investigation or cleanup or remediation programs ordered by this Regional Board or any other agency. Furthermore, this Order does not exempt the Dischargers from compliance with any other laws, regulations, or ordinances which may be applicable, nor does it legalize these waste treatment and disposal facilities, and it leaves unaffected any further restrictions on those facilities which may be contained in other statutes or required by other agencies. Continue any remediation or monitoring activities until such time as the Executive Officer determines that sufficient cleanup has been accomplished and this Order has been rescinded.
16. Consistent with California Water Code sections 13304 and 13365, the Dischargers shall reimburse the Regional Board for reasonable costs associated with oversight of the investigation and cleanup of the waste at or originating from the Site. The Dischargers shall provide the Regional Board with the name or names and contact information for the person(s) to be provided billing statements from the State Water Board.
17. A Public Participation Plan shall be prepared and/or updated when directed by the Executive Officer, as necessary, to reflect the degree of public interest in the investigation and cleanup process.
18. The State Water Board adopted regulations requiring the electronic submittals of information over the Internet using the State Water Board GeoTracker data management system. The Dischargers are required not only to submit the reports required in this Order, but also to comply by uploading all reports and correspondence prepared to date and additional required data formats to the GeoTracker system if they have not already been uploaded. Information about GeoTracker submittals, including links to text of the governing regulations, can be found on the Internet at the following link:  
[http://www.waterboards.ca.gov/water\\_issues/programs/ust/electronic\\_submittal](http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal)

19. The Regional Board, under the authority given by California Water Code section 13267(b)(1), requires inclusion of a perjury statement in all reports submitted by the Dischargers under this Order. The perjury statement shall be signed by a senior authorized representative (not by a consultant). The perjury statement shall be in the following format:

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

20. Failure to comply with the terms or conditions of this Order may result in imposition of civil liabilities, imposed either administratively by the Regional Board or judicially by the Superior Court, in accordance with sections 13268, 13308, and/or 13350 of the California Water Code, and/or referral to the Attorney General of the State of California.
21. None of the obligations imposed by this Order on the Dischargers are intended to constitute a debt, damage claim, penalty or other civil action which should be limited or discharged in a bankruptcy proceeding. All obligations are imposed pursuant to the police powers of the State of California intended to protect the public health, safety, welfare, and environment.
22. As of the date of this Regional Board action, Investigative Order No. R4-2012-0085 issued to BP and ARCO on May 11, 2012, is superseded by this Cleanup and Abatement Order No. R4-2013-0064. Superseding Order No. R4-2012-0085 is not intended to limit Regional Board enforcement actions associated with Order No. R4-2012-0085.

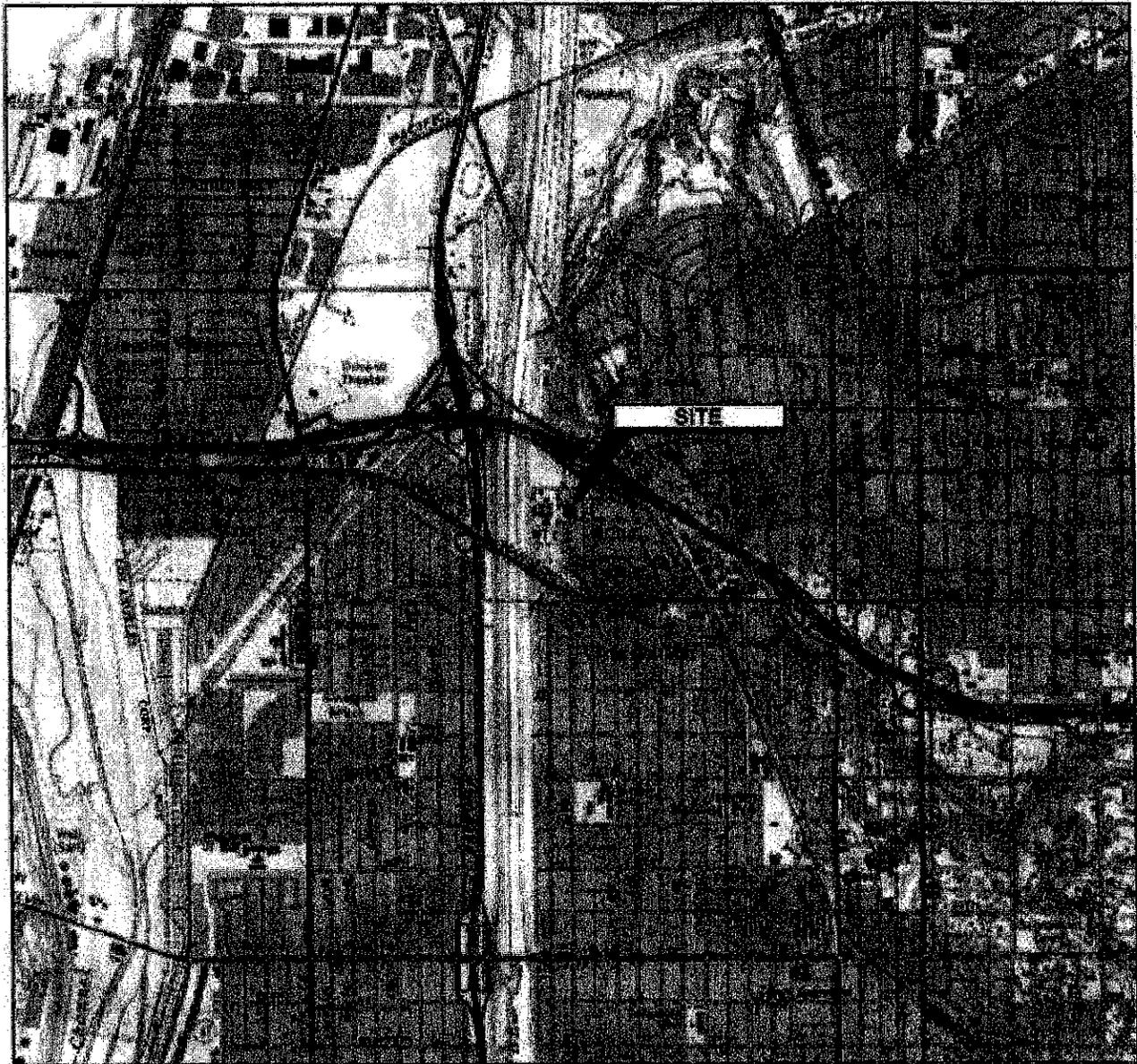
Ordered by: Samuel Unger  
Samuel Unger, P.E.  
Executive Officer

Date: 9-18-2014

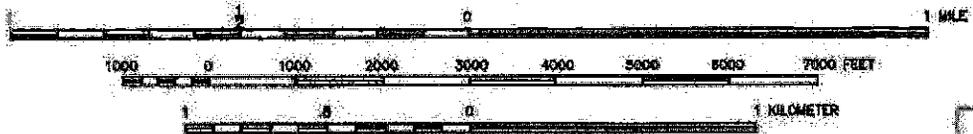
**Exhibit A**

**Figure 1: Site Location Map**

**Figure 2: Site Map**



SCALE 1:24,000



Portion of 7.5-minute Series (Topographic) Map  
 United States Department of the Interior  
 Geological Survey  
 Long Beach, California Quadrangle 1981



QUADRANGLE LOCATION

NORTH GOLDEN AVENUE

INVESTIGATION WORK PLAN  
 INTERSECTION OF BAKER STREET AND  
 LONG BEACH, CALIFORNIA

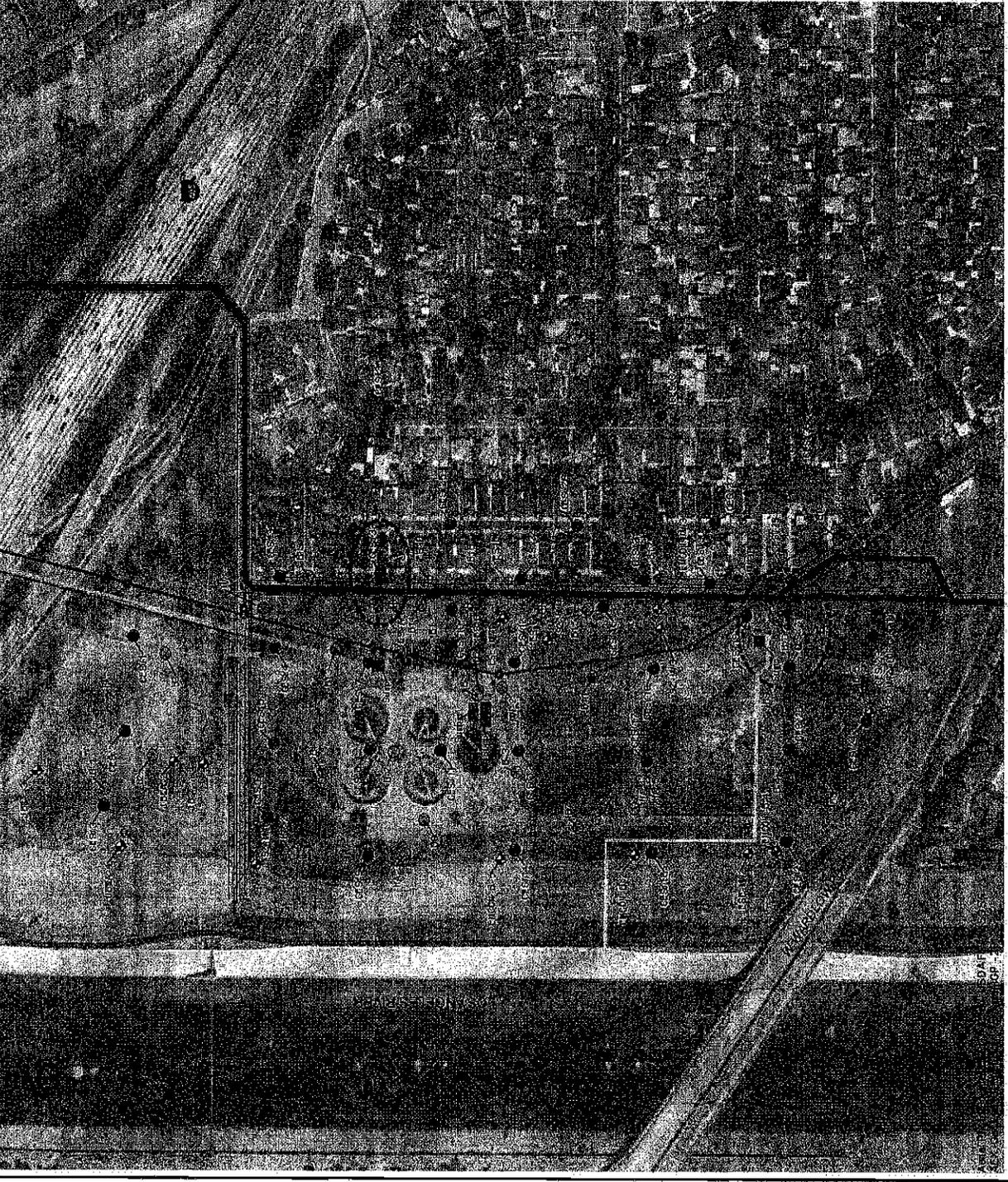
**SITE LOCATION MAP**

12345678 SM MW 5/31/12

**AECOM**

PROJECT NO.	DATE	BY	DATE

FIGURE 1



**LEGEND:**

- HISTORICAL GROUNDWATER MONITORING WELL LOCATION
- VAPOR EXTRACTION SYSTEM WELL (CALL FOR NE ENVIRONMENTAL 2012)
- 001 WELLS DRINGS (BRYCON 2010/2011)
- 0015 OIL VAPOR PROBE (CALIFORNIA ENVIRONMENTAL 2011)
- SOIL BOREHOLE (SHEMCO 1980)
- BURN HOLE
- LOCATION OF PREVENTATIVE MAINTENANCE ON BP LINE 32 AT 4677400-37871 SOUTH OF BAKER STREET
- 12-INCH BP (USPL) 32" PIPELINE (ABANDONED)
- 8-INCH BP (USPL) 34" PIPELINE
- 8-INCH BP (USPL) 34" PIPELINE (ABANDONED)
- 8-INCH BP (USPL) 200" PIPELINE (ABANDONED)
- 8-INCH PLAINS PIPELINE
- 8-INCH PLAINS PIPELINE (ABANDONED)
- 4-INCH GENERAL EXPLORATION PIPELINE (ABANDONED)
- 8-INCH BETTY PIPELINE
- 8-INCH BETTY PIPELINE (ABANDONED)
- 8-INCH GOLDEN EAGLE PIPELINE
- 8-INCH GOLDEN EAGLE PIPELINE (ABANDONED)
- APPROXIMATE STORM PIPING
- 10-INCH UNION OIL PIPELINE
- 8-INCH UNION OIL PIPELINE (ABANDONED)
- 30-INCH WATER PIPELINE
- WATER PIPELINE (ABANDONED)
- 12-INCH 001 WAS TEWATER PIPELINE
- 24-INCH 001'S TURM PIPELINE
- 30-INCH VCP L.A. COUNTY SEWER LINE (APPROXIMATE)
- 6 TO 8-INCH VCP SEWER LINE
- SUMP
- ▭ LARGEST AREA OF CONCERN

**NOTES:**

- 1. PROJECT INFORMATION IS FROM CHURCH & DWIGHT ENGINEERING ACTIVE CHURCH AND ONE OF THE OTHERS IS FROM THE CITY OF LONG BEACH. THESE LINES ARE NOT LISTED ON THIS DRAWING.
- 2. PIPELINE INFORMATION SOURCES: CITY OF LONG BEACH AND AEC RECORDS.

**ABBREVIATIONS:**

- WQDF - REGIONAL WATER QUALITY CONTROL BOARD
- USPL - BP U.S. PIPELINES & LOGGING
- VCP - VITRIFIED CLAY PIPE



**SITE MAP**

INVESTIGATION WORK PLAN  
NEAR 71/2 BAKER STREET  
LONG BEACH, CALIFORNIA

(This includes the Responsible Party pipelines and near the Golden Eagle well located by the City of Long Beach on March 29, 2013.)

PROJECT NO.	DRAWING NO.	DATE
0025125-03	001	10/25/12

**FIGURE 2**

BP Pipelines (North America), Inc.  
 Atlantic Richfield Company (ARCO)  
 ARCO Terminal Services Corporation (ATSC)

**Exhibit B**  
**SUMMARY OF PIPELINE CONTENTS**  
**WITHIN GOLDEN AVENUE**

Line 32 12-inch Diameter Crude Oil (Line 32F)	Line 34 8-inch Diameter "Refined Products (Gasoline, Oil, Gas...)" (Line 34 A,C,E)	Line 252 6-inch Diameter	Source
"Crude and Refined Dark Products"	"Diesel and Refined Products"	"Oily Water" "June 1953 used for WW / prior service was gasoline"	BP Letter to Regional Board dated March 8, 2012
Not for gasoline Empty Liquid (Line 32E)	"Diesel and Refined Products" Non-HVL Product		BP Letter to Regional Board dated July 11, 2012 NPMS - November 20, 2012 www.npms.phmsa.dot.gov
"Refined Products Lines" (ARCO R-110) Oil <sup>1</sup>	"Refined Products Lines" (ARCO R-110) "Gasoline" for Gasoline <sup>2</sup>	"Refined Products Lines" (ARCO R-110) "Gasoline" for Gasoline <sup>3</sup>	Western Oil & Gas Association, <i>Long Beach-Wilmington Harbor Area, Oil Handling Facility Map</i> , updated 1/73 <sup>4</sup> City of Long Beach Map PLG23 revised December 22, 1975
		Gasoline until 1953 Wastewater from 1953 until sometime prior to 1977	BP Letter to Regional Board dated December 4, 2012

Note: Plains Line 52 (crude oil), also in Golden Avenue, was formerly BP Line 6.

<sup>1</sup> National Pipeline Mapping System (NPMS) reports that their Line 34 data for the Site area represents BP's reporting from 2010 to 2012. It does not represent pipeline contents prior to 2010.  
<sup>2</sup> ARCO Line R-110 is listed as having 4-inch, 6-inch, 8-inch, and 12-inch diameter "Refined Products Lines". The 12-inch diameter line is interpreted to represent BP Line 32. The 8-inch diameter line is interpreted to represent BP Line 34. The 6-inch and 4-inch lines are both interpreted to represent BP Line 252. The BP Line 252 interpretation is based in part on BP's December 4, 2012, letter to the Regional Board which states that a 1945 ARCO pipeline map identifies segments of Line 252 pipe where the installation of a 4-inch pipe inside an existing 6-inch pipe occurred along Baker Street and replacement beneath Golden Avenue with the reasons for the pipeline replacements provided.  
<sup>3</sup> City of Long Beach Map PLG23 does not specifically reference BP Line 32; instead it references a 12-inch diameter "Oil" pipeline owned by ARCO located at the same location within Golden Avenue where BP Line 32 exists.  
<sup>4</sup> City of Long Beach Map PLG23 does not specifically reference BP Line 34; instead it references an 8-inch diameter "gasoline" pipeline owned by ARCO located at the same location within Golden Avenue where BP Line 34 exists.  
<sup>5</sup> City of Long Beach Map PLG23 indicates a third ARCO line, a 6-inch diameter "gasoline" pipeline adjacent to BP Lines 32 and 34.

### Exhibit C

#### MONITORING AND REPORTING PROGRAM

This Monitoring and Reporting Program is part of Cleanup and Abatement Order (CAO) No. R4-2013-0064. Failure to comply with this Monitoring and Reporting Program constitutes noncompliance with this Order and the California Water Code, which can result in the imposition of civil monetary liability. All sampling and analyses shall be by USEPA-approved methods or by other methods approved by the Regional Board for this Order. The test methods chosen for detection of the constituents of concern shall be subject to review and concurrence by the Regional Board.

Laboratory analytical reports to be included in technical reports shall contain a complete list of chemical constituents that are tested for and reported on by the testing laboratory. In addition, the reports shall include both the method detection limit and the practical quantification limit for the testing methods. All samples shall be analyzed within the allowable holding time for the method being used. All quality assurance/quality control (QA/QC) samples must be run on the same dates when samples were actually analyzed. Proper chain of custody procedures must be followed and a copy of the completed chain of custody form(s) shall be submitted within reports. All analyses must be performed by a State Water Resources Control Board (SWRCB) Division of Drinking Water (formerly California Department of Public Health) accredited laboratory, unless otherwise approved by the Regional Board.

The Regional Board's *Quality Assurance Project Plan, September 2008*, can be used as a reference and guidance for project activities involving sample collection, handling, analysis and data reporting. The guidance is available on the Regional Board's web site at:

[http://www.waterboards.ca.gov/rwqcb4/water\\_issues/programs/remediation/Board\\_SGV-SFVCleanupProgram\\_Sept2008\\_QAPP.pdf](http://www.waterboards.ca.gov/rwqcb4/water_issues/programs/remediation/Board_SGV-SFVCleanupProgram_Sept2008_QAPP.pdf)

#### GROUNDWATER MONITORING

To facilitate a groundwater monitoring program, the Dischargers shall submit a work plan for performing groundwater sampling from groundwater monitoring wells. The work plan shall propose groundwater sampling techniques, wells to be used for groundwater monitoring, laboratory analytical techniques, and formats for groundwater monitoring reports.

It shall include a provision to include any future groundwater monitoring wells in the groundwater monitoring program. The work plan shall include proposed figures to be included in future groundwater monitoring reports.

Upon approval by the Regional Board Executive Officer, implement the work plan and report results in accordance with the Time Schedule.

## REMEDATION SYSTEMS

Reporting requirements shall be proposed within the required RAP. Reporting requirements will be evaluated by the Regional Board once the remediation methods are known.

## MONITORING UPDATES

Specifications in this Monitoring and Reporting Program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Regional Board Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted or parameters and locations removed or added by the Executive Officer if Site conditions indicate that the changes are necessary.

## REPORTING REQUIREMENTS

1. The Dischargers shall report all monitoring data and information as specified herein and as may be approved in response to work plans submitted by the Dischargers.
2. The Regional Board Executive Officer may revise these monitoring reporting requirements or make more specific monitoring reporting requirements from time-to-time, particularly after reviewing work plans for groundwater monitoring or remedial actions.

Reports that do not comply with the Regional Board's content or reporting requirements may be rejected by the Regional Board and the Dischargers shall be deemed to be in noncompliance with the Monitoring and Reporting Program.

**Exhibit D: Time Schedule**

<b>DIRECTIVE</b>		<b>DUE DATE</b>
<b>1.</b>	<b>Complete Interim Remedial Action Plan</b>	
	Prepare and submit an Interim Remedial Action Plan (IRAP) to mitigate accumulated benzene vapors in soil beneath the Wrigley Heights residential neighborhood.	<b>September 30, 2014</b>
	Prepare and submit an Interim Remedial Action Report after the approval of the IRAP and its implementation.	As directed by the Executive Officer
<b>2.</b>	<b>Develop and Update a Site Conceptual Model</b>	
	Prepare and submit a revised 3-dimensional illustration constituting a Site Conceptual Model (SCM).  The SCM shall be updated periodically as new information becomes available. Updates to the SCM shall be included in all future technical reports submitted.	<b>June 30, 2015</b>
<b>3.</b>	<b>Complete Site Assessment and Delineation of Extent of Wastes</b>	
<b>3a.</b>	Prepare and submit a Master Work Plan for complete assessment and delineation of the extent of all waste constituents in the soil matrix, soil vapor, and groundwater discharged at or from the Site.	<b>November 20, 2014</b>
<b>3c.</b>	Prepare and submit a site assessment report after the approval of the Master Work Plan and its implementation.	As directed by the Executive Officer
<b>4.</b>	<b>Prepare a Human Health Risk Assessment (HHRA)</b>	
	Prepare and submit a work plan to collect sufficient data to enable completion of an HHRA, including proposed techniques for preparing an HHRA.	<b>November 20, 2014</b>

DIRECTIVE		DUE DATE
5.	<b>Conduct Remedial Action</b>	
5a.	<p>Develop and submit a comprehensive Remedial Action Plan (RAP) for cleanup of waste in soil matrix, soil vapor, and groundwater at and originating from the Site, and abatement of the effects of the wastes released to the environment.</p> <p>Additional RAPs may be needed if the implemented remedial measure cannot completely achieve site cleanup goals.</p>	<p>As directed by the Executive Officer</p> <p>As directed by the Executive Officer</p>
5b.	Prepare and submit quarterly remediation progress reports for the remediation system implemented.	Quarterly remediation progress reports are due on the last day of each month following the quarter after Executive Officer approval of the RAP.
6.	<b>Conduct Groundwater Monitoring</b>	
	Include a proposal for performing groundwater monitoring as part of the Master Work Plan required in Item 3a.	November 20, 2014
	<p>Conduct groundwater monitoring according to the following schedule.</p> <p><u>Monitoring Period</u></p> <p>January to June July to December</p>	<p>The next groundwater monitoring report is due on July 31, 2015.</p> <p><u>Report Due Date</u></p> <p>July 31 January 31</p>

# EXHIBIT 2



**BP Pipelines (North America) Inc.**

5905 Paramount Blvd.  
Long Beach, CA 90805  
Phone 562 728-2265  
Fax 562 728-2760

May 28, 2013

Paula Rasmussen  
Assistant Executive Officer  
California Regional Water Quality Control Board  
Los Angeles Region  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

**Subject: Tentative Cleanup and Abatement Order No. R4-2013-0064**

**Site/Case: BP/ARCO Pipelines, near 712 Baker Street, Long Beach, California (SCP No. 0093A and site ID No. 2040420)**

Dear Ms. Rasmussen,

BP/ARCO Pipelines (BP) has been working cooperatively with Water Board staff for over a year to identify the source of groundwater pollution adjacent to the Oil Operators, Inc. site. We were frankly surprised to receive the tentative Cleanup and Abatement Order concluding that we are solely responsible for this pollution.

As you know, we disagree with the Board's determination. These reasons were communicated to the Board in our December 4, 2012 letter and have been covered in numerous communications with Water Board staff. There are a number of reasons why including:

1. We have no record of gasoline pipeline leaks from any of the three pipelines that BP operates under Golden Avenue.
2. Only one of our three pipelines carried gasoline and that was 60 years ago.
3. Our pipelines are located approximately five feet below ground surface and yet there is no evidence of shallow soil pollution.
4. Benzene has been detected in groundwater under the Oil Operators, Inc.'s site.
5. "Fingerprinting" of the hydrocarbons do not show a consistent pattern as would be expected from a pipeline leak.
6. We are concerned that much of the underlying data that staff is relying on has been collected and reported by OOI's consultant, Brycon, LLP which has consistently misrepresented, intentionally or non-intentionally, the condition of the Oil Operators, Inc. site and off property data.
7. The nature of the contaminants and their location points more logically to the operations of the Oil Operators, Inc. site.

The Oil Operators, Inc. site came to be under Water Board oversight as a result of a Consent Decree settlement of a criminal complaint brought by the City of Long Beach Department of Health and Human

Services. There is ample documentation to show that the site accepted a variety of petroleum waste. The site has been closed since 1989 and as such it was not authorized to accept additional waste. Yet nearby community residents noticed, and reported to authorities, several vacuum trucks discharging waste as late as 2000.

We have repeatedly stated that if we believe we are the cause of the groundwater contamination we will step up and take responsibility. We renew that pledge. If sampling reveals that, contrary to our current information, BP is responsible or partially responsible, we will begin cleanup immediately. We have detailed comments on the tentative Cleanup and Abatement Order and they are included as Attachment 1 to this letter. If the Order is issued, we plan to appeal it to the State Water Board. However, we will submit a revised sampling plan to staff whether or not the Board issues the Order.

Finally, we ask that the Board reconsiders issuing a Cleanup and Abatement Order to BP until the accuracy of the Oil Operators Inc. data can be verified. As pointed out in our May 24<sup>th</sup> letter to Mr. Pinaki Guha-Niyogi, the April 15<sup>th</sup> report submitted by Brycon, LLP stated that approximately 4,000 pounds of benzene was collected by the soil vapor extraction system—the actual amount is closer to two pounds. When existing data are reviewed and additional data are collected we believe the Board will have a more robust picture of the site from which to make a decision.

Thank you for your time and attention.

Sincerely,  
BP Pipelines (North America) Inc.



Stephen D. Comley  
Environmental Coordinator

cc: Mr. Jeffrey Hu, LARWQCB  
Mr. Pinaki R. Guha-Niyogi, LARWQCB  
Councilman James Johnson, City of Long Beach  
Ms. Joan Greenwood, Wrigley Area Neighborhood Alliance  
Mr. Kevin Laney, Oil Operators, Inc.  
Mr. George B. Paspalof, Brycon, LLC  
Mr. Nelson Kerr, City of Long Beach, Health and Human Services Department  
Ms. Carmen Piro, City of Long Beach, Health and Human Services Department  
Mr. Ngiabi Gicuhi, Plains Pipelines  
Ms. Gabriele Windgasse, California Department of Public Health  
Mr. Darrell Fah, BP Remediation Management  
Mr. Frank Muramoto, AECOM  
Ms. Mary Jo Anzia, AECOM

**ATTACHMENT 1**  
**BP/ARCO Pipelines Detailed Comments**  
**Tentative Cleanup and Abatement Order No. R4-2013-0064**  
**Related to site near 712 Baker Street, Long Beach, California ("Site")**

**Background**

The tentative Clean-up and Abatement Order (CAO) is the latest communication in a series of communications that began in or around May 11, 2012, when the Los Angeles Regional Water Quality Control Board (LARWQCB or Board) issued an investigative order to BP under Water Code section 13267 (13267 Order). BP petitioned the State Water Quality Control Board for review of that order in a June 8, 2012 petition (June 8, 2012 Petition), but held that petition in abeyance to allow time to work with the LARWQCB on the 13267 Order. BP has taken numerous steps to work cooperatively with the LARWQCB but communications from Oil Operators, Inc. (OOI) have interfered.

- On July 11, 2012 and on September 12, 2012, BP submitted work plans for additional investigation in response to the 13267 Order. On August 9, 2012, BP and the Board met to review data.
- In September and October 2012, however, OOI shared data with the LARWQCB and apparently led the Board to believe that BP pipelines were impacting the eastern boundary of the OOI site (particularly the southeast corner (SEC) of the OOI site). The OOI data BP has reviewed are not entirely accurate. Among other things, the data reported iso-concentration maps for benzene as one continuous source extending to this SEC and into residential neighborhoods farther east. To date, the existing groundwater data do not support the depictions. Significant topographic variation is not accurately depicted on 2010 and 2011 OOI and California Environmental drawings.
- On or about October 12 and 19, 2012, BP and the Board discussed the OOI site. Then again, on November 1, 2012, BP and the Board had a conference call to evaluate whether BP would begin remediation at the Site despite no evidence of a gasoline release from a BP pipeline. A November 6, 2012 letter from the Board made requests not specified in the 13267 Order, including the request to sample groundwater.
- Shortly thereafter, on November 20, 2012, the LARWQCB notified BP that its prior work plans were insufficient.
- In about November 2012, BP voluntarily agreed to submit a third version of a work plan that would investigate groundwater in addition to soil and soil vapor along Golden Avenue.
- On December 4, 2012 BP provided a letter to explain the reasons it disagreed with the Board's determination that BP lines were a source of contaminants at the Site.
- On December 5, 2012 BP met with LARWQCB staff and legal counsel to ensure that the scope of work requested from BP remained intact. BP sought to ensure that:
  - BP was not required to conduct work of other responsible parties;
  - the Board did not require that BP identify another likely source but rather that BP continue to provide data relevant to its pipelines;
  - BP receive all information from the Board regarding the OOI lines at the 712 Baker site that may be sources of contamination;
  - the Board make additional inquiries about the processing of refined product on the OOI site in light of historical data confirming that OOI processed waste fluids from refineries in unlined sumps, some of which were 60 feet deep; and

- o the Board fully evaluate the extent of contamination on the OOI property, which in 1989 received complaints from neighboring school children and residents and eventually a cease and desist order to halt soil excavation and aeration.

### **Detailed Comments**

Overall, the detailed facts, statements, and evaluations presented in the BP December 4, 2012 letter,<sup>1</sup> which presented detailed summaries and evaluation of data available at that time, appear to have been disregarded by the LARWQCB.

- The tentative CAO does not acknowledge receipt of BP's letter dated December 4, 2012 nor the meeting between BP and the LARWQCB on December 5, 2012.

Based on discussions at this meeting and articulated in follow-up correspondence,<sup>2</sup> the LARWQCB indicated BP should wait for the Board to respond to additional data before proposing further work requested in the 13267 Order. Therefore, BP was awaiting a written response from the LARWQCB to this letter and meeting. The issuance of the tentative CAO is inconsistent with BP's understanding from the Board that it should hold off further response to the 13267 Order until further notice from the Board.

Comments on specific items included in the tentative CAO are listed below, referenced by tentative CAO item number. Legal comments appear at the end of this attachment.

2. "... which was formerly used to treat production brines containing water and crude oil ..." This statement appears to ignore documentation related to OOI operations that indicates that OOI accepted and handled refinery waste at the site, e.g.,:

- "Waste fluids from member wells and refineries are piped to the sumps where any residual petroleum is separated and recovered."<sup>3</sup>
- October 27, 2000 (following shut-down of the OOI treatment plant in 1998) – Bob's Vacuum Service is recorded dumping waste at the site by a local resident: the driver "admitted dumping and said the oil companies have permission to dump there." The resident further indicated that at the Long Beach Police Department determined that the driver's "paperwork was in order" and "the driver's company has had a long-standing contract and that dumping was going on ALL THIS TIME."<sup>4</sup>
- 1984 OOI investigation findings by the City of Long Beach Department of Health:<sup>5</sup>
  - "OOI violated Section 25189.5 of the California Health and Safety Code in that they knowingly and intentionally disposed of hazardous waste, to wit: Oil waste, lead, and PCB at a point not authorized by this department."
  - "OOI violated Section 25191 (d)(2) of the California Health and Safety Code in that they stored and treated the same hazardous wastes to wit: oil waste, lead, and PCB for a

<sup>1</sup> BP, December 4, 2012. Letter from Mr. Stephen Comley (BP Pipelines [North America], Inc) to Mr. Pinaki Guha-Niyogi (LARWQCB), Subject: *Response to Regional Water Quality Control Board Letter of November 6, 2012.*

<sup>2</sup> Tropio & Morlan, December 7, 2012. Letter from Ms. Viviana Heger to Ms. Jennifer Fordyce, Esq., (SWRCB), Re: *Regional Water Quality Control Board May 11, 2012 Order Pursuant to Water Code Section 13267 and Relating to Property Near 712 Baker Street, Long Beach, California.*

<sup>3</sup> US Geological Survey, 1953. Department of the Interior. "Native and Contaminated Ground Waters in the Long Beach-Santa Ana Area, California." Geological Survey Water-Supply Paper 1136. Washington D.C., p. 71-75.

<sup>4</sup> Letter from Mr. Richard Gutmann to Mr. Arias, attached to email dated October 27, 2000 from Mr. Richard Gutmann to the Long Beach City Council.

<sup>5</sup> Unknown author (incomplete file), 1984, *Statements of Fact in the Investigation of Oil Operators, Inc.*