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EXXONMOBIL OIL CORPORATION

STATE WATER RESOURCES CONTROL BOARD

OF THE STATE OF CALIFORNIA

In the Matter of the Petition of EXXONMOBIL OIL CORPORATION For Review of Order No. R4-2007-0049 (NPDES Permit No. CA0055387) California Regional Water Quality Control Board, Los Angeles Region	No. VERIFIED PETITION FOR REVIEW AND REQUEST FOR HEARING

ExxonMobil Oil Corporation ("Petitioner") hereby files this Verified Petition for Review and Request for Hearing of Order No. R4-2007-0049, reissuing Waste Discharge Requirements/National Pollutant Discharge Elimination System ("NPDES") Permit No. CA0055387 (the "Permit") for Petitioner's Torrance, California Refinery ("Torrance Refinery" or the "Refinery"), along with the Declarations of Ronald L. Vaughan and Margaret Rosegay in Support of Verified Petition for Review and Request for Hearing.

1. The Permit was adopted by the Los Angeles Regional Water Quality Control Board ("Regional Board") on September 6, 2007. A copy of the Permit is attached hereto as Exhibit 1.

2. Petitioner's mailing address is as follows: 3700 West 190th Street, Torrance, California 90504-5790. Petitioner's telephone number is (310) 212-2800.

3. Petitioner owns and operates the Torrance Refinery, located at 3700 West 190th Street, Torrance, California. Process wastewater and storm water at the Refinery are routinely collected, treated in the Refinery's wastewater treatment system, and discharged to the Los Angeles County Sanitation Districts ("LACSD") pursuant to an Industrial Wastewater Discharge Permit. Vaughan Decl., ¶ 2. The storm water includes flows from process and non-process areas of the Refinery, including tank farm areas, as well as a large quantity of municipal storm water that runs onto the Refinery from the City of Torrance. *Id.* During very significant rain events, storm water is temporarily diverted into storm water collection facilities located at the Refinery so as not to overwhelm the Refinery's wastewater treatment system or exceed the flow limitations contained in the Industrial Discharge Permit. Vaughan Decl., ¶ 6. These collection facilities consist of several large retention basins and a tank with a combined storage capacity of 38.2 million gallons. Storm water in the retention basins and/or tank undergoes treatment (e.g., gravity oil/solids separation) and is then discharged to the wastewater treatment system (and thence to LACSD) as quickly as possible after the conclusion of the storm event in order to maintain maximum available storage capacity. Vaughan Decl., ¶ 7. In the vast majority of cases, 100% of the water that is diverted into the storm water collection facilities is eventually discharged to LACSD via the Refinery's wastewater treatment system. *Id.* However, Petitioner maintains an NPDES permit (certain provisions of which are being challenged herein) for the sole purpose of discharging storm water to waters of the United States during extreme and/or prolonged storm events when there is an imminent risk that the Refinery's storm water retention capacity will be exceeded. In such circumstances, in order to prevent flooding of the Refinery and the resulting safety and operational hazards that would ensue, storm water is discharged to the Torrance Flood Control Lateral ("TFCL") which flows directly into the Dominguez Channel, a water of the United States. See

Vaughan Decl., ¶¶ 8, 9. In the past 12 years, Petitioner has discharged storm water to the Dominguez Channel on only four occasions. See Vaughan Decl., ¶ 10.[1]

4. This Petition is filed pursuant to section 13320 of the Water Code, which authorizes any aggrieved person to petition the State Board to review an action by a Regional Board.

5. Insofar as relevant to this Petition, the Permit contains numeric effluent limits for certain pollutants — namely, settleable solids, turbidity, total suspended solids, total petroleum hydrocarbons and xylene — that are allegedly based on the Regional Board's Best Professional Judgment ("BPJ"). BPJ limits are technology-based and are subject to the criteria in 40 C.F.R § 125.3(c) and (d). Neither the Permit nor the Fact Sheet contains any rationale for the Regional Board's application of such limits to the Refinery's storm water discharge. Nor does the Permit or Fact Sheet explain how the BPJ limits were derived.

Further, the Permit includes interim and final numeric water quality-based effluent limitations ("WQBELs") that apply to storm water discharges to the TFCL. The Regional Board's inclusion of such limits is inconsistent with state and federal law and policy, including the Clean Water Act ("CWA"), the California Toxics Rule ("CTR"), the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California ("State Implementation Policy" or "SIP"), and other federal and state policy and guidance regarding regulation of storm water discharges. The Regional Board's action is improper because it inappropriately applies the CTR and the SIP to storm water discharges and fails to identify, let alone justify, any "unique" or specific circumstances at the Torrance Refinery that might support inclusion of numeric storm water limits in the Permit. The Regional Board also erred in finding that the discharge of storm

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[1] In February 2003, Petitioner experienced two other minor unintentional releases of storm water to the Channel due to an equipment malfunction. Although unanticipated, these discharges were permitted under the permit. The equipment in question (a valve) has since been repaired. Vaughan Decl., ¶ 11.

water from the Refinery has a "reasonable potential" to cause or contribute to excursions above water quality standards, as required by 40 C.F.R. § 122.44(d)(1). The Regional Board's "reasonable potential" findings are based on assumptions that are scientifically erroneous and unsupported.

In addition to Petitioner's general objection to the inclusion of unjustified BPJ limits and numeric WQBELs in the Permit, Petitioner has specific objection to (i) the technology-based effluent limit for xylene (allegedly required by anti-backsliding considerations), and (ii) the WQBELs for bis(2-ethyl hexyl)phthalate (BEHP), a known artifact of wastewater sampling and analysis, and chromium VI. Neither BEHP nor chromium VI is used or manufactured at the Refinery. To the best of Petitioner's knowledge, Petitioner will be unable consistently to meet most of the final effluent limitations challenged herein, and may be unable to meet certain of the interim limits, in the event a discharge to the TFCL were to occur.

6. Petitioner is aggrieved by the Regional Board's action because Petitioner will be subject to improperly derived and unsupported effluent limitations, compliance with which is infeasible and unnecessary from a water quality perspective. Petitioner will therefore be at significant risk of noncompliance and exposed to substantial liability for fines and penalties, as well as potential citizen enforcement.

7. For the reasons set forth herein, Petitioner requests that the State Board amend or revise the Permit to delete the technology-based limits for settleable solids, turbidity, total suspended solids, total petroleum hydrocarbons and xylene on the grounds that the Regional Board failed to articulate any rationale for such limits beyond the unexplained exercise of "best professional judgment." In addition, all numeric WQBELs for storm water discharges (both interim and final) should be deleted from the Permit absent an accurate determination of "reasonable potential" and a specific determination that derivation of appropriate numeric limitations is feasible. Petitioner maintains that the Regional Board cannot, on the administrative record of this Permit, make a reasonable and defensible determination with respect to either "reasonable potential" or feasibility. In the

absence of such determinations, the Regional Board should be directed to revise the Permit to eliminate all inappropriate numeric limits and instead require implementation of Best Management Practices ("BMPs") for storm water discharges, consistent with federal and state law and policy.

8. Petitioner's statement of points and authorities in support of the issues raised by this Petition commences below. The Petition raises substantial issues of fact and law that are appropriate for review by the State Board, specifically:

(a) whether the Regional Board abused its discretion and acted arbitrarily and capriciously and in violation of law by issuing an NPDES permit containing technology-based limits predicated on "best professional judgment," where the administrative record, including the Permit and accompanying Fact Sheet, is absolutely devoid of any explanation of the technical basis for the limits or how they were derived; and

(b) whether the Regional Board abused its discretion and acted arbitrarily and capriciously and in violation of law by issuing an NPDES permit containing numeric water quality-based effluent limits for storm water discharges that occur on a highly intermittent basis and only during extreme weather conditions (e.g., well in excess of 25-year/24-hour storm events), where there has been no valid determination of "reasonable potential" and no finding of "unique circumstances" as required by the State Board's decision in *In the Matter of the Petition of Boeing Company*, Order No. 2006-0012, 2006 WL 4030793, December 18, 2006 ("*Boeing Order*").

9. A copy of this Petition is being sent via first-class mail to the Regional Board on October 9, 2007, to the attention of Ms. Tracy Egoscue, Executive Officer.

10. Petitioner submitted written comments on the draft Permit to the Regional Board on July 18, 2007, raising the substantive issues and objections raised in this Petition. The Regional Board made some changes to the draft Permit in response to Petitioner's comments, but failed to address its principal concerns relating to BPJ limits and numeric storm water limits. Although the tentative order was taken up as part of the consent calendar at the Regional Board's September 6, 2007 hearing, Petitioner confirmed with the

State Board's Office of Chief Counsel, prior to the hearing, that a decision by a permittee to allow an item to remain on the consent calendar would not act as a waiver of the right to file a petition for review of the final permit, so long as the permittee had timely filed written objections to the draft permit, as is the case here. See Declaration of Margaret Rosegay in Support of Verified Petition for Review and Request for Hearing, filed herewith.

11. Petitioner requests a hearing to address the contentions herein and reserves the right to present additional evidence. *See* 23 Cal. Code Regs., § 2050.6.

STATEMENT OF POINTS AND AUTHORITIES

I. BACKGROUND

The Torrance Refinery produces gasoline, diesel fuel, jet fuel and other refined products from crude oil. The Refinery is designed and operated so that the "first flush" of storm water runoff is sent directly to the Refinery's wastewater pretreatment system where it is combined with process wastewater and discharged to the publicly owned treatment works operated by LACSD. See Vaughan Decl., ¶ 5. "First flush" storm water would be expected to contain a higher level of contaminants than storm water flows occurring later in the same storm event; Petitioner's management of the "first flush" water in its wastewater treatment system prevents these pollutants from entering waters of the United States.

Thereafter, during normal wet weather conditions, storm water runoff from both the process and non-process areas of the Refinery, including tank farms areas (totaling 734 acres), plus municipal runoff from the City of Torrance (which may account for as much as 25% of the storm water managed at the Refinery),[2] is sent to the wastewater treatment system for subsequent discharge to LACSD. See Vaughan Decl., ¶¶ 2, 3. During more significant storm events, however, the storm water is manually diverted to the Refinery's storm water collection facilities, by repositioning certain valves, so as not to overwhelm the

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[2] The City maintains that it has the legal right to divert municipal storm water to the Refinery, claiming that the Refinery is located in the natural drainage area for this portion of the City.

wastewater treatment system or exceed the flow limitations contained in the discharge permit issued by LACSD. Vaughan Decl., ¶¶ 6, 4. These collection facilities consist of several large retention basins and a tank with a combined storage capacity of 38.2 million gallons, estimated to be sufficient to contain the water from substantially greater than a 25-year/24-hour storm. See Vaughan Decl., ¶ 6, 13. Storm water in the retention basins and/or tank undergoes treatment (e.g., gravity oil/solids separation) and is discharged to the wastewater treatment system (and thence to LACSD) as quickly as possible after the conclusion of the storm event in order to maintain maximum available storage capacity in the collection facilities. See Vaughan Decl., ¶ 7. In the vast majority of cases, 100% of the water that is diverted into the storm water collection facilities is eventually discharged to LACSD via the Refinery's wastewater treatment system. *Id.*

Petitioner maintains an NPDES permit (certain provisions of which are being challenged herein) for the sole purpose of discharging storm water to waters of the United States during extreme and/or prolonged storm events when there is an imminent risk that the Refinery's storm water retention capacity will be exceeded. When these excessive accumulations are present, storm water is discharged to the Torrance Flood Control Lateral which empties into the Dominguez Channel. See Vaughan Decl., ¶ 8. Petitioner delays such discharge events as long as possible, and discharges only in the event flooding of the Refinery appears imminent. The duration of such storm water discharge is limited to the period required to prevent flooding of the Refinery. *Id.* In the past 12 years, Petitioner has discharged storm water to the Dominguez Channel under its NPDES permit on only four occasions. Since 1999, there have been only two permitted discharges of storm water from the Torrance Refinery to the Dominguez Channel, one in December 2004/January 2005 and the other one in February 2005.[3] Vaughan Decl., ¶ 10. The 2004-2005 rainy season was one of the wettest on record. *Id.* Based on the foregoing, despite the logistic challenges of managing these large volumes of water, it is clear that Petitioner has already undertaken

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[3] See footnote 1 above.

very significant efforts to prevent discharges of storm water to waters of the United States, and has been very successful in this regard. It bears re-emphasis that the storm water that is discharged to the TFCL has undergone treatment in the basins (gravity oil/solids separation) and undergoes one further treatment step — filtration through excelsior (wood fiber) filters — before the point of discharge.

On February 9, 2006, Petitioner applied for renewal of its previous NPDES permit for the Torrance Refinery, Order No. 01-129. It should be noted that, under its prior NPDES permit, Petitioner was authorized to discharge treated groundwater from an ongoing groundwater remediation project at the Refinery to the TFCL on a continuous basis. Petitioner now treats the extracted groundwater to a level sufficient to allow its beneficial reuse as boiler feed water within the Refinery, thereby eliminating this discharge altogether. As a result, the Permit challenged herein applies almost exclusively to storm water discharges.[4]

On June 19, 2007, the Regional Board issued a draft permit containing technology-based effluent limits, allegedly based on BPJ, for settleable solids, turbidity, total suspended solids ("TSS"), total petroleum hydrocarbons ("TPH") and xylene. The xylene limit is also allegedly based on anti-backsliding considerations due to its inclusion in the prior permit. In addition (and insofar as relevant to this Petition), the draft permit also included numeric water quality-based effluents limits ("WQBELs") for chromium (VI), copper, lead, zinc, mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate ("BEHP"). The Regional Board included these WQBELs on the grounds that the Refinery's storm water discharge allegedly had a "reasonable potential" to

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[4] The permit also allows the discharge of *de minimis* amounts of steam condensate and Refinery washdown water. Condensate most often occurs as moisture in and around steam traps and is typically not present in measureable amounts in the storm water conveyances. In the case of Refinery washdown water, this water is not generated during storm events and is routed to the oily water sewer and thence to the Refinery's wastewater treatment system for discharge to LACSD. Any residual washdown water remaining in the system at the beginning of a storm event would be sent to the oily sewer as part of the "first flush." This water does not commingle with storm water that might be discharged to the Dominguez Channel. Vaughan Decl., at ¶ 12.

cause or contribute to an exceedance of applicable water quality objectives for each of these compounds. Notably, WQBELs for mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and BEHP were not included in the prior permit. The new Permit contains interim limits for each of these parameters which will be superseded by more stringent final limits on May 17, 2010. Interim limits were also established for copper, lead and zinc.

On July 18, 2007, during the comment period on the draft permit, Petitioner submitted timely written comments objecting (among other things) to the proposed technology-based limits and WQBELs for storm water, as described above, on the same grounds as set forth in this Petition. The draft permit was revised in certain respects on August 21, 2007, but the permit writer rejected Petitioner's comments concerning the requirements challenged herein. In its August 21, 2007 response to Petitioner's comments, the Regional Board failed to provide any explanation as to why or how it had exercised its "best professional judgment" to derive the technology-based limits in the permit. In the case of the WQBELs, the Regional Board acknowledged that under federal and state law and policy, BMPs are the preferred approach for controlling storm water discharges. *ExxonMobil Oil Corporation, Torrance Refinery (NPDES No. CA0055387) Response to Comments* ("Response to Comments"), p. 8. Nevertheless, the Regional Board asserted that "permitting authorities may identify circumstances warranting numeric effluent limitations" for storm water and that such limits were justified for the Torrance Refinery because (i) reasonable potential was demonstrated for each of the pollutants, using procedures from the SIP; and (ii) the receiving water body is listed as "impaired" under CWA section 303(d). *Id.* at 8, 10, 11.

The Regional Board's assertions seeking to justify numeric storm water limits are in error. First, the Regional Board offered no discussion or analysis to support its conclusion that BPJ limits must be included in the permit. For this reason alone, the limits purportedly based on BPJ are fatally flawed. On a substantive level, Petitioner maintains that properly established BPJ limits (if any are required at all) should be based on the technologies

employed by Petitioner to treat its storm water, and would be significantly higher than those contained in the Permit. Second, with respect to WQBELs, while it is true that such effluent limits are required where "reasonable potential" has been demonstrated (assuming the demonstration is performed correctly, which Petitioner disputes), it does not follow that those limits must be numeric. *See Communities for a Better Environment v. State Water Resources Control Board* (2003) 109 Cal. App. 4th 1089, 1104-1105 ("*CBE*") (holding that WQBELs may be narrative where derivation of numeric limits is infeasible). Thus, the Regional Board's repeated claim that numeric limits are required simply because "reasonable potential" exists is incorrect. See Response to Comments, pp. 4, 6, 10, 13, 14. Further, the claim that numeric limits are required based on the 303(d) listing of the Dominguez Channel (*id.* at 11, 12-13, 40) is equally misplaced, as EPA guidance clearly explains that BMPs are appropriate for storm water discharges to 303(d)-listed receiving waters. Each of these issues is discussed in detail below.

The circumstances relied on by the Regional Board do not justify departure from the well-established approach to regulation of storm water discharges through implementation of BMPs. The Regional Board has failed to demonstrate that calculation of scientifically valid numeric storm water limits is feasible in this case, or to identify any unique reasons justifying the imposition of such limits on the Torrance Refinery, as is suggested by the State Board's *Boeing Order* (discussed below). Accordingly, the Regional Board's decision to impose numeric storm water limits on the Torrance Refinery was arbitrary and capricious, an abuse of discretion, and contrary to applicable law and policy.

II. THE REGIONAL BOARD FAILED TO JUSTIFY INCLUSION OF CERTAIN TECHNOLOGY-BASED EFFLUENT LIMITS IN THE PERMIT

A. THE REGIONAL BOARD FAILED TO CONSIDER REQUISITE FACTORS FOR ESTABLISHING EFFLUENT LIMITS BASED ON BPJ

The technology-based effluent limitations for petroleum refineries in the cracking subcategory (such as the Torrance Refinery) are set forth in 40 C.F.R Part 419, Subpart B. The Part 419 regulations establish a limited set of parameters which may be regulated in

storm water discharges that have not been mixed with process water. Specifically, wastewater consisting solely of contaminated runoff, that does not exceed 110 mg/l total organic carbon (TOC) and 15 mg/l oil and grease, may be discharged without being subject to the technology-based limits of Subpart B. 40 C.F.R. §§ 419.23(f)(1), 419.24(e)(1). Based upon those regulations, the Regional Board imposed limits of 110 mg/l TOC and 15 mg/l oil and grease. See Fact Sheet, pp. F-14 - 15 and Table F-7. Petitioner does not object to the limits for TOC and oil and grease.

However, the Regional Board also imposed technology-based limits for settleable solids, turbidity, TSS, TPH, and xylene. *Id.* For xylene, the Regional Board additionally (or perhaps alternatively) asserts that the anti-backsliding prohibition requires the limit from the prior permit to be carried forward. Petitioner disputes that assertion (see Section II.B. below). As to the more general claim that the technology-based limits are based on the Regional Board's exercise of "best professional judgment," the Permit and Fact Sheet are devoid of any explanation of, or justification for, these limits. The entirety of the Regional Board's explanation is the statement, "Other BPJ based limits include settleable solids, turbidity, TSS, and total petroleum hydrocarbons." Fact Sheet, p. F-14. Thus, the Regional Board claims to be applying BPJ but provides no explanation at all of *how* BPJ was applied, as required by the CWA and implementing regulations.

Section 402(a)(1) of the CWA authorizes the issuance of NPDES permit conditions on a case-by-case basis when the permitting agency determines that such conditions are "necessary to carry out the provision of the Act." 33 U.S.C. § 1342(a)(1). When establishing permit conditions on a case-by-case basis, the Regional Board is authorized to establish effluent limitations based on permit writer's "best professional judgment." However, BPJ limits are only appropriate in the first instance "to the extent that EPA-promulgated effluent limitations are inapplicable." 40 C.F.R. § 125.3(c)(2). In this case, the EPA-promulgated limits in 40 C.F.R. § 419.23(f)(1) and § 419.24(e)(1) *are* applicable and, in fact, were applied by the Regional Board to set limits for TOC and oil and grease. Fact Sheet, p. F-14. In those sections, EPA provided that "if wastewater

consists solely of contaminated runoff and is not commingled or treated with process wastewater, *it may be discharged* if it does not exceed 110 mg/l total organic carbon" (40 C.F.R. § 419.23(f)(1)) and "does not exceed 15 mg/l oil and grease" (40 C.F.R. § 419.24(e)(1)) (emphasis added). Thus, from the standpoint of technology-based limits, the regulations expressly allow the discharge of other pollutants so long as storm water has not been commingled or treated with process wastewater. In developing and adopting categorical effluent limitation guidelines for refineries that produce gasoline, EPA necessarily had to consider the possibility that storm water runoff might contain xylene and the other basic constituents of gasoline (benzene, toluene and ethylbenzene). Since none of these compounds is regulated by the effluent limitation guidelines, it follows that EPA concluded that the satisfactory performance of technologies that could feasibly be employed to address high volume, highly dilute storm water flows was most appropriately measured by reference to TOC and oil and grease. This is most evident in the case of the Permit's TSS limit, since 40 C.F.R Part 419, Subpart B generally imposes TSS limits on refinery wastewater discharges *except* for storm water-only discharges that meet the TOC and oil and grease limits.[5] According to EPA guidance, "prior to establishing BPJ-based limits for a pollutant not regulated in an effluent [limitation] guideline, the permit writer should ensure that the pollutant was not considered by EPA while developing the [guideline]." EPA, NPDES Permit Writers' Manual, p. 69. There is no indication in the administrative record that the Regional Board made this determination, or indeed any determination at all relating to the technology employed at Petitioner's Refinery.

Although the Regional Board is entitled to flexibility in establishing permit terms and conditions under the rubric of BPJ,

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[5] 40 C.F.R Part 419, Subpart B also contains technology-based limits for total and hexavalent chromium for process wastewater discharges and mixtures of process wastewater and storm water. Significantly, the Permit does *not* include technology-based limits for chromium presumably because the Regional Board properly concluded that, in the case of a storm water-only discharge, sections 419.23(f)(1) and 419.24(e)(1) preclude the imposition of chromium limits if oil and grease and TOC are less than the levels noted above. The same should be true for settleable solids, TSS, turbidity and TPH.

> inherent in this flexibility [] is the burden on the permit writer to show that the [exercise of] BPJ was reasonable and based on sound engineering analysis. If this evaluation of reasonableness does not exist, the BPJ condition is vulnerable to a challenge by the permittee. Therefore, the need for and derivation of the permit condition and the basis for its establishment, should be clearly defined and documented.

NPDES Permit Writers' Manual, p. 69. The regulations provide specific guidance as to how the permit writer should proceed in this task. Specifically, the permit writer must consider:

- the appropriate technology for the category or class of point sources, based on all available information, and any unique factors relating to the applicant;
- the age of the equipment and facilities involved;
- the process employed;
- the engineering aspects of the application of various types of control techniques;
- process changes;
- for BCT requirements, the reasonableness of the relationship between the costs and benefits of attaining effluent reductions, and a comparison of costs and reductions of the pollutants from POTW discharges to those from industrial discharges;
- for BAT requirements, the cost of achieving such effluent reductions; and
- non-water quality environmental impacts, including energy requirements.

40 C.F.R. § 125.3(c)(2), § 125.3(d); NPDES Permit Writers' Manual, p. 70. These factors are not discretionary — the "permit writer *must* consider each of these factors in establishing BPJ-based conditions in permits." *Id.* (emphasis added).

The Regional Board failed to comply with requirements of 40 C.F.R. § 125.3 in establishing BPJ-based effluent limits for settleable solids, turbidity, TSS, TPH and xylene. The Regional Board offered no analysis regarding the methods it used or the factors it considered, if any, in establishing BPJ-based limits. Instead, as noted above, the Fact Sheet (p. F-14) contains only a bald statement, without discussion, that "[o]ther BPJ based limits

include settleable solids, turbidity, TSS, and total petroleum hydrocarbons." In its Response to Comments, the Regional Board again failed to offer any rationale in support of the BPJ-based limits and merely asserted that "[b]ased on staff's BPJ, these limits are technologically achievable, economically feasible, and are necessary to protect receiving water quality." Response to Comments at 4-5. Given the absence of any explanation at all of *why* and *how* the Regional Board believes the limits are technologically achievable, economically feasible, or necessary to protect water quality,[6] the Regional Board failed to provide the requisite justification for imposing such limits in the Permit. See NPDES Permit Writers' Manual, p. 195 ("[A] prudent permit writer will develop a fact sheet for any permit that required complex calculations or special conditions. This will be especially true for permit conditions based on BPJ"); *id.* at 205 ("The permit writer should be sure that (1) the information on which BPJ limits are based are unimpeachable, (2) the limits were derived from data in a logical manner, in accordance with established procedures, and (3) the BPJ limits so derived are technically sound and meet BCT or BAT standards for economic reasonableness").

It is well established that administrative orders such as NPDES permits must be supported by the findings and such findings must be based upon evidence in the record. An order not supported by evidence in the record constitutes an abuse of discretion. *See* 40 C.F.R. § 124.8(b)(4) (requiring that a fact sheet contain a discussion of the basis for the permit conditions contained in the NPDES permit); see also *Topanga Ass'n for a Scenic Community v. County of Los Angeles* (1974), 11 Cal. 3d 506, 515 (quoting *S.E.C. v. Chenery Corp.* (1943), 318 U.S. 80, 94) ("the orderly functioning of the process of review requires that the grounds upon which the administrative agency acted be clearly disclosed and adequately sustained"); *California Edison v. State Water Resources Control Board*

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[6] The Regional Board's conclusory statement in this regard is also misguided in that this concept – necessary for the protection of water quality – is typically applied to WQBELs, i.e., limits for pollutants that have been determined to have a reasonable potential to cause or contribute to excursions above water quality standards.

(1981), 116 Cal. App. 3d 751, 761 (holding that waste discharge standards were invalid because the findings were inadequate); *In the Matter of Petition of City and County of San Francisco, et al.*, State Board Order No. WQ-95-4 (Sept. 21, 1995) at 10 (declining to adopt more stringent water quality standards because record lacked requisite findings and evidentiary support). Here, the Regional Board provided no rationale whatsoever in the Permit, Fact Sheet or the Response to Comments for imposing technology-based (BPJ) limits for settleable solids, turbidity, TSS, TPH or xylene. Inclusion of these limits in the Permit in the absence of any evidence in the record explaining or justifying their inclusion constitutes an abuse of discretion by the Regional Board.

B. THE ANTI-BACKSLIDING PROHIBITION DOES NOT REQUIRE INCLUSION OF AN EFFLUENT LIMITATION FOR XYLENE

The Regional Board's further reliance on the anti-backsliding prohibition to justify inclusion of the xylene limit in the new Permit is misplaced and represents an abuse of discretion. Petitioner believes that the xylene limit has its origins in the prior permit, and that the limit was derived through the exercise of BPJ in consideration of activated carbon adsorption technology typically used to treat contaminated groundwater. At the time, the Regional Board reasonably applied the xylene limit to the continuous groundwater discharge (formerly Outfall 001a), but *wrongly* applied it to the intermittent storm water discharge (Outfall 001b). Petitioner objected to the limit on Outfall 001b on the grounds that there was no BPJ basis to apply that limit to Outfall 001b (the storm water outfall).

The Regional Board has now repeated the same error by carrying the xylene limit forward into the new Permit, which applies only to intermittent discharges of storm water.[7] Petitioner maintains that the continuation of this limit, as applied to a highly intermittent discharge consisting exclusively of storm water which does <u>not</u> undergo treatment by activated carbon adsorption, is wholly unsupportable and represents a serious abuse of discretion. The limit is not based on any data from Refinery storm water or on any

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[7] As an aside, Petitioner eliminated the discharge of extracted groundwater to the Dominguez Channel in 2003. See Fact Sheet, p. F-5.

evaluation of the treatment technologies employed by Petitioner to treat storm water prior to discharge (i.e., gravity oil/solids separation and filtration through excelsior filters).

The anti-backsliding prohibition does not compel inclusion of the xylene limit in the new Permit. Anti-backsliding does not justify the perpetuation of technical errors in a prior permit. See 40 C.F.R. § 122.44(l)(2)(i)(B)(2). Furthermore, to the extent that the Regional Board believes Petitioner's storm water retention ponds are capable of controlling xylene down to a limit of 10 ug/l (see Effluent Limitation IV.A.1.a., Table 6), that conclusion is clearly erroneous and wholly unsupported by anything in the administrative record. It should be noted that xylene is not among the pollutants for which a categorical effluent limitation has been established under Part 419, Subpart B, even for a commingled process water/storm water discharge. As such, there is no justification, based on anti-backsliding or any other rationale, for inclusion of a xylene limit in the new Permit.

III. UNDER FEDERAL AND STATE LAW AND POLICY, BMPS ARE THE APPROPRIATE FORM OF WATER QUALITY-BASED EFFLUENT LIMITATION FOR STORM WATER DISCHARGES

A. FEDERAL LAW AND POLICY SUPPORT THE USE OF BMPS RATHER THAN NUMERIC LIMITS FOR STORM WATER

Under applicable regulations, WQBELs are required when pollutants are discharged at levels which have reasonable potential to cause or contribute to exceedance of state water quality standards. In determining whether "reasonable potential" exists, the permit writer must use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant in the effluent, the sensitivity of species used in whole effluent toxicity testing and, where appropriate, the dilution of the effluent in the receiving water. 40 C.F.R. § 122.44(d)(1).

The CWA defines effluent limitations (including WQBELs) as "any restriction established by a State or the [EPA] on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of

compliance." 33 U.S.C. § 1362(11). As the court in the *CBE* case held, under this broad definition, WQBELs need not be numeric. 109 Cal. App. 4th at 1104-1105. In particular, federal regulations expressly authorize a BMP-based approach in establishing WQBELs for storm water. 40 C.F.R. § 122.44(k) provides that BMPs may be used "to control or abate the discharge of pollutants when: . . . (2) authorized under section 404(p) of the [CWA] ***for the control of storm water discharges***; (3) ***numeric*** effluent limitations are ***infeasible***; or (4) the [best management] practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the [CWA]" (emphases added). "[E]ssentially, 40 C.F.R. § 122.44(k)(2) allows permitting agencies to treat BMPs as the type of WQBEL appropriate for control of storm water discharges." *Divers' Environmental Conservation Organization v. State Water Resources Control Board* (2006) 145 Cal. App. 4th 246, 257 ("*Divers*"). The *Divers* court found that "[BMPs] authorized by 40 C.F.R. 122.44(d)(1)(ii) are in fact WQBELs which a permitting authority may employ when it has found that storm water discharges may cause a receiving body to exceed state water quality standards." *Id.* at 258. Thus, under *CBE* and *Divers*, not to mention the express language of 40 C.F.R. § 122.44(k), the Regional Board is simply wrong to assert that "for all parameters that have a reasonable potential, numeric WQBELs are required" (Response to Comments, p. 10).

As discussed in Petitioner's July 18, 2007 comments (pp. 9-13), EPA regulations and policy recognize that BMPs, rather than numeric WQBELs, are most appropriate for storm water discharges such as those at the Torrance Refinery. According to EPA's *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*, 61 Fed. Reg. 43761 (Aug. 26, 1996):

> Due to the nature of storm water discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations . . . EPA will use an interim permitting approach for NPDES storm water permits. The interim permitting approach uses [BMPs] in first-round storm water permits and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards.

EPA did note that "[i]n some cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits as necessary and appropriate." *Id.* However, in the absence of such information, BMPs are the only justifiable approach.[8]

In discussing why scientifically valid numeric WQBELs are difficult to derive for storm water discharges, EPA explained that such discharges "are highly variable both in terms of flow and pollutant concentrations, and the relationships between discharges and water quality can be complex." EPA, *Questions and Answers Regarding Implementation of an Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*, 61 Fed. Reg. 57245, 57246 (Nov. 6, 1996). EPA further explained that:

> [T]he existing methodologies for deriving numeric water quality-based effluent limitations [] were designed primarily for process wastewater discharges which occur at predictable rates with predictable pollutant loadings under low flow conditions in receiving waters. Using these methodologies, limitations are typically derived for each specific outfall to be protective of low flows in the receiving water. Because of this, permit writers have not made widespread use of the existing methodologies and models for storm water discharge permits.

Id.

The Regional Board (Response to Comments, pp. 9, 12) asserts that the continued validity of EPA's 1996 interim policy is questionable following the Ninth Circuit's decision in *Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9th Cir. 1999), and that the numeric storm water limits in the Torrance Refinery Permit are necessary to "give effect to the reasoning" in that case. This argument is not persuasive. Contrary to the Regional Board's position, the Ninth Circuit *upheld* EPA's reliance on its policy of using BMPs "to provide for the attainment of water quality standards." *Id.* at 1166. The dictum in *Defenders of Wildlife* that "industrial discharges [unlike municipal discharges] must comply strictly with

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[8] The Regional Board relies on EPA's statement supporting more specific conditions or limitations on storm water where "sufficient" information exists. *See, e.g.,* Response to Comments, pp. 10, 14. Irrespective of the Regional Board's unsupported assertion, no such information actually exists in this case.

state water-quality standards" (*id.* at 1165) cannot reasonably be interpreted to mean that numeric limitations must be imposed, without regard to the technical infeasibility of calculating appropriate limits for highly variable storm water discharges. Instead, the court characterized industrial dischargers' compliance obligation as "strict" to distinguish it from the less strict "maximum extent practicable" standard applicable to municipal storm water dischargers. The court did not address at all the question of feasibility of calculating numeric limits for storm water discharges associated with industrial activity, and nothing in *Defenders of Wildlife* casts any doubt on the continuing validity of BMPs as authorized by EPA's interim storm water permitting policy or 40 C.F.R. § 122.44(k). *See* 191 F.3d at 1166-1167. Indeed, if the Regional Board's interpretation of the *Defenders of Wildlife* case were correct, both EPA's and the State Board's general permits for storm water discharges from industrial facilities, which continue to rely on BMPs, would be illegal. Obviously that is not the case.[9]

Most significantly, EPA affirmed the appropriateness of the BMP-based approach in guidance on establishing waste load allocations for storm water as part of the Total Maximum Daily Load process. *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs* ("*Establishing TMDLs*"), EPA Office of Water, November 22, 2002. In that guidance, EPA stated that WQBELs for storm water discharges that implement TMDLs may be expressed in the form of BMPs. *Id.* at 2. EPA further stated that it "recognizes that the available data and information usually are not detailed enough to determine wasteload allocations for NPDES-regulated storm water discharges on an outfall-

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[9] The year following the *Defenders of Wildlife* case, EPA adopted its Storm Water Multi-Sector General Permit for Industrial Facilities (65 Fed. Reg. 64746, October 30, 2000). In doing so, EPA cited *Natural Resources Defense Council v. Costle*, 568 F.2d 1369, 1380 and n. 21 (D.D.C. 1977) in support of BMPs: "Congress did not regard numeric effluent limitations as the only permissible limitation on a discharger. . . . [W]hen numerical effluent limitations are infeasible, EPA may issue permits with conditions designed to reduce the level of effluent discharges to acceptable levels." *See* 65 Fed. Reg. at 64759.

specific basis." *Id.* at 4. Thus, EPA concluded, BMPs are an appropriate means of regulating storm water discharges, even in situations where the receiving waters are listed as impaired under CWA section 303(d). In short, the Regional Board's claim that numeric storm water limits are required based on the 303(d) listing of the Dominguez Channel is not supported by applicable EPA guidance.

B. STATE LAW AND POLICY, INCLUDING THE BOEING DECISION, SUPPORT THE USE OF BMPS RATHER THAN NUMERIC LIMITS

For the same reasons as those relied on by EPA, the State Board, in issuing its own general permit for industrial storm water discharges, determined that:

> it is not feasible at this time to establish numeric effluent limitations. This is due to the large number of discharges and the complex nature of storm water discharges. This is also consistent with the US EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits" . . . .
>
> Best Management Practices (BMPs) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges are appropriate where numeric effluent limitations are infeasible, and the implementation of BMPs is adequate to achieve compliance with BAT/BCT and with water quality standards.

State Board Order No. 97-03-DWQ, *NPDES General Permit/Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* (April 17, 1997), at pp. 2-3; *see also* Fact Sheet for State Board Order No. 97-03-DWQ at p. VIII.

More recently, the State Board commissioned an expert panel to address the feasibility of setting numeric pollutant limits for storm water discharges. The panel's final report, *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities* (June 19, 2006) ("Panel Report"), observed that "there is wide variation in storm water quality from place to place, facility to facility, and storm to storm . . . . Since the storm-to-storm variation at any outfall

can be high, it may be unreasonable to expect all events to be below a numeric value." Panel Report, p. 6. The Panel Report recommended that, before numeric storm water limits are established for an industrial category, a database of pollutants discharged and achievable pollutant limits for that category should be established. *Id.*, p. 21. Though the Regional Board claims that this conclusion in the Panel Report represents an endorsement of numeric storm water limits (Response to Comments, p. 7), it fails to note that the panel found that no such database now exists, for any industrial category. Thus, the expert panel's report does not provide any support for the numeric limits included in the Permit for the Torrance Refinery.

Finally, the State Board recently addressed the subject of numeric limits for storm water discharges in the *Boeing Order*. In that decision, the State Board upheld the numeric limits at issue, taking care to emphasize that numeric limits were justified in that case due to the unique circumstances presented by Boeing's Santa Susana Field Laboratory ("SSFL"). Moreover, the State Board did *not* repudiate its general policy regarding the appropriateness of BMPs or conclude that numeric limits for storm water discharges were generally appropriate.[10] Rather, the State Board concluded that the SSFL was "unique" based on its site characteristics and history of water quality problems. *Boeing Order* at 6.[11] Indeed, throughout the Order, the State Board's insistence on the "uniqueness" of the facility is striking; *see id.* at 2 ("[t]he issues addressed in this Order are relevant only to a unique industrial operation subject to an individual NPDES permit"); *id.* at 6 ("[t]he conditions described above make SSFL a unique site, especially because of its size, the

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[10] It should be noted that the Boeing Order has been appealed to Superior Court by the discharger.

[11] Specifically, the State Board identified the SSFL as unique because it (1) is a large industrial site in a remote area; (2) occupies a large area on hillsides with runoff flowing into a number of different watersheds; (3) features large areas of historical contamination and development near large areas of open space and native vegetation; (4) could discharge an estimated 272 million gallons of storm water runoff in a 24-hour/10-year storm event; (5) is the subject of ongoing cleanup and groundwater remediation pursuant to the Resource Conservation and Recovery Act; and (6) could affect residential developments in the vicinity. *Boeing Order* at 6.

degree of historical contamination, and the site topography that results in large amounts of runoff during storm events"); *id.* at 8 ("SSFL is a unique site warranting thorough and detailed regulation. It is not at all the same as a typical facility subject to the General Permit for Industrial Activities"); *id.* at 13 ("we again consider the uniqueness of the SSFL site – its large size, its hilltop location, the significant chemicals used in the past, and to a lesser extent, in the present"); *id.* at 18 ("the Boeing site is unique [] from a physical standpoint – the immense area covered, the extensive past contamination, existing activities, and the amount of runoff from the steep terrain").

By contrast, there is nothing unique about storm water at the Torrance Refinery, which is typical for industrial facilities where surface runoff may be exposed to contaminants. The Regional Board offered no discussion in the Permit, the Fact Sheet or the Response to Comments regarding the "uniqueness" of the Torrance Refinery. On the contrary, the Regional Board referred only to the fact that the Dominguez Channel is 303(d)-listed and that water quality standard exceedances have occurred — facts which are certainly not unusual, much less "unique." Accordingly, the Regional Board's decision to impose numeric storm water limits on the Torrance Refinery finds no support in the *Boeing Order*.

IV. THE REGIONAL BOARD IMPROPERLY RELIED ON THE SIP AND CTR TO DETERMINE REASONABLE POTENTIAL AND CALCULATE WQBELS FOR STORM WATER DISCHARGES

In finding "reasonable potential" to cause or contribute to exceedances of water quality standards and in calculating WQBELs for chromium (VI), copper, lead, zinc, mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate, the Regional Board improperly chose to apply procedures from the SIP. *See* Permit Fact Sheet, pp. F-15, 17-29. The SIP expressly "does not apply to regulation of storm water discharges." SIP, p. 3, n. 1. Nevertheless, the Regional Board asserted that it had sufficient data available to utilize the SIP methodology to determine "reasonable potential" and to establish numeric limits for storm water based on CTR criteria. Response to Comments, pp. 2, 10-14. However, neither the SIP nor the CTR was

intended for that purpose, and it is both technically and legally incorrect to use the SIP procedures and CTR criteria for determining "reasonable potential" and setting numeric limits. The Regional Board may point to the limited data available from discrete storm water sampling events (*see* Response to Comments, p. 11), but it has failed to demonstrate that available data are sufficient to determine "reasonable potential" and numeric WQBELs in a scientifically valid manner.

A. THE REGIONAL BOARD'S RELIANCE ON SIP PROCEDURES WAS TECHNICALLY INCORRECT

The SIP procedures apply to steady-state discharges and are based on a statistical model (the lognormal model) that does not fit storm water data. *See* SIP sections 1.3, 1.4. The SIP calculation procedures do not provide an appropriate basis for establishing numeric limits, expressed as never-to-be-exceeded numbers, for a highly variable discharge. Storm water discharges are very different from traditional process wastewater discharges, which tend to be relatively stable in their composition, volume and flow, allowing for an accurate calculation of pollutant mass and concentration in the wastewater. By contrast, storm water discharges vary widely in their timing, duration, quantity, flow and constituent concentrations, all of which are determined by rainfall which is intermittent and highly variable. Rainfall varies over the course of the season and also over the course of individual storms. In arid portions of the state, such as the Los Angeles Basin, there may be only a few storms per year that generate runoff, and the volume of runoff in separate storms may vary greatly. Given the lack of information to characterize accurately the intermittent and variable nature of storm water, it is inappropriate to use data from discrete and highly infrequent sampling events to conclude that there is "reasonable potential" for exceedances of water quality standards or to calculate numeric WQBELs. Discrete sampling of storm water merely provides a "snapshot" of pollutant concentrations at a particular time and place, but is not representative of the entire flow of storm water discharged from a given site. Thus, any "reasonable potential" determination based on methodology designed for process wastewater discharges (such as the SIP) is scientifically invalid.

The Regional Board also purports to rely on EPA's March 1991 *Technical Support Document for Water Quality-based Toxics Control* ("TSD"), stating that the TSD "reasonable potential" procedure is applicable to storm water discharges. Permit Fact Sheet, p. F-26; Response to Comments, p. 10. These statements are incorrect, as the TSD contains no "reasonable potential" methodology for storm water discharges. While the Fact Sheet (p. F-15) cites a statement in the TSD that "an analogous approach developed by a regulatory authority can be used to determine the reasonable potential" for storm water discharges, the Regional Board has never developed any such "analogous approach" for intermittent and variable storm water flows. Instead, the Regional Board applied the existing SIP procedure as if the storm water flows were a continuous discharge. Moreover, the Regional Board failed to account for factors considered in the TSD's dry weather "reasonable potential" procedure, including the frequency of discharge, the duration of discharge, dilution in receiving water and receiving water flow rate. Indeed, failing to consider a mixing zone in the analysis and in the calculation of the numeric limits, as allowed by the TSD — despite the physical fact of dilution of the discharges with receiving water — undermines the scientific validity of both the "reasonable potential" and WQBEL determinations.

Finally, the Regional Board exhibits a basic confusion between the alleged need for storm water limits and the basis for calculating them. The Regional Board concedes that BMPs are the preferred approach and that storm water discharges are complex, but asserts that "the simple fact remains that the discharges exceed water quality standards and are discharged into the Dominguez Channel at a time when the Dominguez Channel and ultimately the Los Angeles Harbor are exceeding water quality standards and cannot assimilate additional impairing pollutants." Response to Comments, p. 11. However, that "simple fact" addresses the alleged *need* for stringent storm water controls. As discussed above, EPA's and the State Board's endorsement of BMPs, and the underlying concerns with the use of the CTR and SIP procedures for storm water, are based on the infeasibility of *calculating* numeric limits for occasional and highly variable storm water flows. Indeed,

EPA's storm water policy provides that more specific conditions, such as numeric limits, may be included in a permit *only* when adequate information exists to develop those conditions or limits. 61 Fed. Reg. 43761. However, the Regional Board did not address these concerns or demonstrate the adequacy of available information in this case. To claim that numeric limits would have value, if valid limits could feasibly be developed, does not mean that they *can* feasibly be developed, using the SIP or any other procedures, based on currently available data.

B. THE REGIONAL BOARD HAS NO DISCRETION TO APPLY SIP PROCEDURES AND CTR CRITERIA TO STORM WATER DISCHARGES

The simple statement that the SIP does not apply to storm water, in SIP footnote 1, is amplified by the State Board's discussion in the Functional Equivalent Document ("FED") that accompanied adoption of the SIP. In the FED, Chapter 5.1, the State Board determined that applying the SIP procedures to storm water would be infeasible:

> Storm water discharges are highly variable both in terms of flow, pollutant load and concentrations. In addition, the relationships between storm water discharges and water quality can be complex . . . . Because of the nature of storm water discharges and the typical lack of information on which to base numeric water quality based effluent limitations, it has not been feasible for the State Board to establish numeric effluent limitations for storm water permits.

FED, at V-136. Accordingly, the State Board adopted the No Action alternative for storm water regulation:

> This alternative makes no changes in the existing storm water program at the SWRCB and RWQCBs . . . . The existing NPDES storm water permits contain narrative objectives, rather than the numeric limits found in the more conventional NPDES permits. Compliance with these narrative objectives is a function of the dischargers' timely and effective implementation of the management practices and programs identified in the storm water management plan (MS4 permits) or the storm water pollution prevention plan (industrial/construction permits).

FED, at V-137. By choosing the No Action alternative, the State Board did not leave room for the Regional Board to exercise its discretion to apply the SIP procedures to storm water. Rather, selection of the No Action alternative precluded any such exercise of discretion. In fact, had the State Board intended the SIP procedures to be discretionary in the case of storm water discharges (i.e., to be applicable on a case-by-case basis), the FED should have evaluated reasonably foreseeable means of compliance associated with that option; *see* California Environmental Quality Act Guidelines (14 Cal. Code Regs.) § 15187. FED Chapter 5.1 contains no such evaluation, because the State Board did not contemplate or sanction exercises of discretion in this regard.[12]

In addition, in its own review of the SIP, the Office of Administrative Law ("OAL") *deleted* a provision in SIP section 3 that would have provided the regional boards with discretion, on a case-by-case basis, to require monitoring of certain toxics in storm water:

> The inclusion of storm water dischargers in this part of the policy is confusing in light of the State Board's clearly stated intent in the introduction to the policy (which is consistent with the Board's intent as reflected in the minutes of the March 2, 2000, adoption hearing) that: ***This policy does not apply to regulation of storm water discharges***. Footnote 1. Consequently, the provision regarding storm water dischargers in Section 3 of the policy is severed and disapproved.

OAL, Notice of Approval of Regulatory Action at 5, May 22, 2000 (emphasis added). In light of OAL's conclusion, reinterpretation of Footnote 1 to authorize case-by-case application of the SIP to storm water discharges, as the Regional Board proposes, is wholly improper. Such an interpretation would read Footnote 1 out of the SIP, and would in effect constitute underground rulemaking, in violation of the California Administrative Procedure Act ("APA"). Gov't. Code § 11340, et seq. There is no question as to the formal regulatory status of the SIP. As the California Supreme Court has emphasized, agency

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[12] In response to comments regarding amendments to the SIP in 2005, the State Board reiterated its view that the SIP "clearly states that it does not apply to regulation of storm water discharges." Public Comments and Staff Responses to Proposed 2005 Amendments to SIP Functional Equivalent Document, Response to Comment 15 (February 3, 2005).

interpretive policies of general application, which guide enforcement in all cases of a particular type and that are not merely restatements of prior agency decisions, constitute regulations as defined in APA. *Tidewater Marine Western, Inc. v. Bradshaw* (1996) 14 Cal. 4th 557, 572-576. The Court concluded that such interpretive polices are void "underground regulations" if not adopted in accordance with the APA. The same concerns addressed by the Court in *Tidewater Marine* are at issue here: ensuring that all "persons or entities whom a regulation will affect have a voice in its creation . . . [and] providing some security against bureaucratic tyranny." *Id.* at 568-69. Here, the Regional Board has acted in a manner contrary to the unambiguous prohibition against application of the SIP to storm water discharges, in derogation of the plain language of Footnote 1 and in violation of the APA.

This conclusion is bolstered by the fact that the SIP procedures are intended to implement the CTR. Yet in adopting the CTR, EPA indicated that "compliance with water quality standards through the use of [BMPs] is appropriate" in the case of storm water discharges. 65 Fed. Reg. 31682, 31703 (May 18, 2000). In response to comments on the proposed CTR, EPA clearly stated that the CTR criteria were not intended to be applied as a basis for deriving numeric storm water limits. Were this the intended outcome, the limits would wrongly:

> be equivalent to the criteria values and applied as effluent limits never to be exceeded, or calculated in the same manner that effluent limits are calculated for other point sources, such as POTWs. The commenter then appears to assume that such WQBELs would then require the construction of very costly end-of-pipe controls.
>
> EPA contends that neither scenario is valid with regards to developing WQBELs for storm water discharges or establishing compliance with WQBELs. EPA acknowledges that wet weather discharges are technically difficult to model and evaluate financially, because they are intermittent and highly variable. Wet weather discharges also occur under more diverse hydrologic or climatic conditions than continuous discharges from industrial or municipal facilities, which are evaluated under critical low flow or drought

> conditions. If the EPA had enough data to completely characterize all the conditions and do the necessary modeling, WQBELs would be developed ***using dynamic models to account for the intermittent loadings and exposures from the storm water discharges.*** In the absence of this data, EPA will continue to advocate the use of BMPs, as discussed in the CTR preamble.

California Toxics Rule Response to Comments Report, Volume II (December 1999), Response to Comment CTR-001-007 (emphasis added). Thus, the Regional Board's suggestions that the CTR does not exclude storm water discharges and supersedes pre-CTR permits and policies favoring BMPs (Response to Comments, pp. 10-12) are, at best, misleading and inconsistent with EPA's own view that "the final CTR will not significantly affect the current storm water program being implemented by the State, which includes the requirement to develop [BMPs] to control pollutants in storm water discharges." *Id.*, Response to Comment CTR-035-044c.

V. THE REASONABLE POTENTIAL FINDINGS AND LIMITS FOR BIS(2-ETHYL HEXYL)PHTHALATE AND CHROMIUM VI IN STORM WATER DISCHARGES ARE IN ERROR

A. BIS(2-ETHYL HEXYL)PHTHALATE

The Regional Board had no valid basis for a finding of "reasonable potential" for bis(2-ethylhexyl)phthalate in storm water discharges. This substance is not used at the Torrance Refinery and is not a constituent of crude oil or any petroleum product that is produced by the Refinery. BEHP is a plasticizer that is found in many types of plastic equipment and is commonly detected in water samples as an artifact of the procedures used in sample collection and handling. Vaughan Decl., at ¶ 16. In analogous EPA discussion relating to the occurrence of anomalous detections of BEHP in groundwater samples, EPA has stated:

> A literature search indicates that Bis(2-Ethylhexyl)phthalate is a manufactured chemical that makes plastic more flexible and is a common sampling and laboratory artifact. A further review of the report documenting the sample collection activities indicates several pieces of sampling equipment used were plastic products and have

> the potential for contaminating the groundwater samples with Bis(2-Ethylhexyl)phthalate (e.g. plastic tubing from the submersible pump, plastic tubs for decon, etc.). A thorough evaluation of these data leads EPA to conclude that the anomalous concentrations of Bis(2-Ethylhexyl)phthalate are attributable to sampling equipment artifacts and does not represent a contaminant in the groundwater.

Documentation of Environmental Indicator Determination, RCRA Corrective Action Program (Feb. 1999), attached as Exhibit 2. Given its well-understood source as a laboratory artifact, and in the absence of any known Refinery source that could affect storm water, there is no valid technical basis for imposing a numeric limit for this compound in the Permit.

Further, for this class of pollutant, the Regional Board's reasonable potential analysis is particularly flawed because it assumes continuous exposure to a constant discharge for 70 years (i.e., the water quality criterion is based on 70 years' continuous exposure to a bioaccumulative, potential carcinogen). This assumption of continuous exposure is blatantly incorrect with respect to storm water discharges that occur very rarely, and in fact have occurred only four times in the past 12 years.[13]

B. CHROMIUM VI

Similarly, there is no basis for the Regional Board's finding of "reasonable potential" for hexavalent chromium (chromium VI) or for inclusion of a water quality-based effluent limitation for this compound. The Fact Sheet itself states that the evidence from past discharges did not demonstrate "reasonable potential" for chromium VI. Fact Sheet, p. F-18. Nevertheless, citing Step 7 of the procedure outlined in Section 1.3 of the SIP, the Regional Board included a WQBEL for this parameter in the Permit on the grounds that chromium VI is commonly associated with petroleum refinery operations. Petitioner does not use chromium VI in its operations, and there is no reason to believe

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[13] This same "disconnect" is equally true with respect to the WQBELs established for benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene, which are based on a factually invalid assumption of 70 years of continuous exposure to these chemicals through storm water.

this compound would be found in storm water discharges from the Refinery. Vaughan Decl., at ¶ 19. The fact that chromium VI may have been used at refineries in the past does not support inclusion of a numeric storm water limit in the Permit.

VI. THE REGIONAL BOARD FAILED TO CONSIDER THE COST OF COMPLIANCE WITH NUMERIC LIMITS THAT ARE MORE STRINGENT THAN THE BMPS REQUIRED BY FEDERAL LAW

In *City of Burbank v. State Water Resources Control Board* (2005), 35 Cal. 4th 613, the State Supreme Court interpreted the effect of the federal CWA on certain requirements of the California Water Code. The Court found that the CWA precludes consideration of economic factors in setting effluent limitations in NPDES permits. However, under section 13241 of the Water Code, regional boards must consider economic factors (among a list of enumerated factors) when establishing water quality objectives in basin plans; and Water Code section 13263 in turn requires permit writers to take into consideration the requirements of section 13241. Accordingly, the Court concluded that federal preemption precludes regional boards from considering economics to justify imposing effluent limits *less stringent* than required by federal law – but state law can require consideration of economic effects when imposing limits that are *more stringent* than those under federal law. *City of Burbank*, 35 Cal. 4th at 627-628.

As discussed above, the CWA requires only BMPs, not numeric limits, for storm water discharges. The numeric limits imposed by the Regional Board in this case are more stringent than federally required BMPs. Following *City of Burbank*, the Regional Board should have complied with the Water Code requirements to consider economic effects, including "the costs the permit holder will incur to comply with the numeric pollutant restrictions set out in the permit . . . ." *Id.* at 620. Compliance with the numeric storm water limits in this case is not cost-effective. As described in the Permit and Fact Sheet, storm water at the Torrance Refinery is routed to the Refinery's wastewater treatment system for treatment and discharge to LACSD. The Refinery's storm water retention capacity (38.2 million gallons) already significantly exceeds that typically employed by

retention BMPs and is sufficient to handle the vast majority of storms. Petitioner estimates that it would cost many millions of dollars to increase this retention capacity to the point where it could store all runoff produced by the rarest and largest of storms. Vaughan Decl., ¶ 14. To do so would not be cost-effective. Thus, to the extent that the Regional Board asserts discretion to impose requirements beyond those of federal law, the Regional Board violated the Water Code by failing to consider compliance costs before adopting more stringent, state-only requirements.

REQUEST FOR RELIEF

For the reasons set forth above, Petitioner respectfully requests that the State Board grant Petitioner the following relief:

A. Revise the Permit to delete the technology-based limits for turbidity, settleable solids, total suspended solids, total petroleum hydrocarbons and xylene.

B. Revise the Permit to delete all interim and final numeric water quality-based effluent limits for storm water discharges, including the limits for bis(2-ethyl hexyl)phthalate and chromium VI.

C. Direct the Regional Board to require implementation of BMPs for control of storm water discharges, consistent with federal and state law and policy.

D. Such other relief as the State Board may deem just and proper.

Dated: October 9, 2007.

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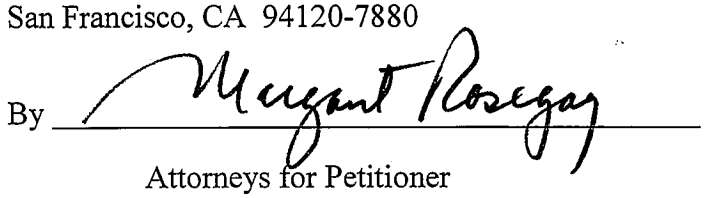
By 

Attorneys for Petitioner

VERIFICATION

I, Ronald L. Vaughan, am the ExxonMobil Torrance Refinery — Water Advisor and have responsibility for permitting and regulatory compliance activities relating to storm water management at the Refinery. I have read the foregoing Verified Petition for Review and Request for Hearing and believe that the statements made therein are true and correct. If called as a witness to testify with respect to the matters stated therein, I could and would competently do so under oath.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this verification was executed in Torrance, California, on October 9, 2007.

Ronald L. Vaughan

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EXXONMOBIL OIL CORPORATION

STATE WATER RESOURCES CONTROL BOARD

OF THE STATE OF CALIFORNIA

In the Matter of the Petition of EXXONMOBIL OIL CORPORATION For Review of Order No. R4-2007-0049 (NPDES Permit No. CA0055387) California Regional Water Quality Control Board, Los Angeles Region	No. DECLARATION OF MARGARET ROSEGAY IN SUPPORT OF VERIFIED PETITION FOR REVIEW AND REQUEST FOR HEARING

I, Margaret Rosegay, hereby declare and state as follows:

1. I am an attorney duly licensed to practice in the State of California and am a partner of the law firm Pillsbury Winthrop Shaw Pittman LLP. Except where stated to be based upon information and belief, the statements made in this declaration are based upon my personal knowledge. If called as a witness to testify with respect to the matters stated in this declaration, I could and would competently do so under oath.

2. On August 28, 2007, I sent an e-mail to Mr. Ted Cobb, of the Office of Chief Counsel, State Water Resources Control Board, asking whether he was aware of any circumstance in which a discharger, who had timely submitted written comments on a draft NPDES permit, had been deemed to have waived its right to petition for review solely

because he had failed to request removal of the item from the Regional Water Quality Control Board's consent calendar.

3. On August 29, 2007, Mr. Cobb replied to my e-mail, indicating that he was unaware of any circumstance in which this issue had come up, but that, in his opinion, the right to petition for review was perfected by the timely submittal of written comments, and would not be waived by allowing the matter to be adopted on consent.

4. A true and correct copy of my e-mail to Mr. Cobb and Mr. Cobb's reply is attached as Exhibit 1 hereto.

I declare under penalty of perjury under the laws of the state of California that the foregoing is true and correct. Executed on October 9, 2007, at San Francisco, California.

Margaret Rosegay

Margaret Rosegay

Rosegay, Margaret N.

From: Ted Cobb [TCobb@waterboards.ca.gov]
Sent: Wednesday, August 29, 2007 8:30 AM
To: Rosegay, Margaret N.
Subject: Re: Uncontested Calendars

I do not recall this issue ever arising so I am just speaking from my own perspective, not based on precedent. I agree with you that standing to sue should not be based on whether or not someone deliberately lengthens one of our meetings. If you are on record in opposition, that would seem to be enough.

Ted Cobb
Assistant Chief Counsel
State Water Resources Control Board
(916) 341-5171

>>> "Rosegay, Margaret N." <margaret.rosegay@pillsburylaw.com> 8/28/2007 4:58 PM >>>

Hi, Ted

I'm 99.9% sure, but wanted to confirm that where a discharger has submitted written comments on a draft permit, that is sufficient to preserve the right to petition for review, and that the discharger's consent thereafter to the permit's placement on the uncontested calendar does not constitute a waiver of that right. In other word's, a discharger is not required to demand that an item be removed from the uncontested calendar in order to later appeal to the State Board. Do you agree?

Many thanks.

Meg Rosegay
Pillsbury Winthrop Shaw Pittman LLP
50 Fremont Street
San Francisco, CA 94105
margaret.rosegay@pillsburylaw.com
Tel: (415) 983-1305
Fax: (415) 983-1200

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EXHIBIT 1

PILLSBURY WINTHROP SHAW PITTMAN LLP
MARGARET ROSEGAY #96963
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50 Fremont Street
Post Office Box 7880
San Francisco, CA 94120-7880
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Attorneys for Petitioner
EXXONMOBIL OIL CORPORATION

STATE WATER RESOURCES CONTROL BOARD

OF THE STATE OF CALIFORNIA

In the Matter of the Petition of EXXONMOBIL OIL CORPORATION For Review of Order No. R4-2007-0049 (NPDES Permit No. CA0055387) California Regional Water Quality Control Board, Los Angeles Region	No. DECLARATION OF RONALD L. VAUGHAN IN SUPPORT OF VERIFIED PETITION FOR REVIEW AND REQUEST FOR HEARING

I, Ronald L. Vaughan, declare as follows:

1. I am the ExxonMobil Torrance Refinery — Water Advisor and have responsibility for permitting and regulatory compliance activities relating to storm water management at ExxonMobil's Refinery in Torrance, California (the "Refinery"). Except where stated to be based on information and belief, the statements made in this declaration are based upon my personal knowledge. If called as a witness to testify with respect to matters stated in this declaration, I could and would competently do so under oath.

2. Process wastewater and storm water at the Refinery are routinely collected and treated in the Refinery's wastewater treatment system, and then discharged to the Los Angeles County Sanitation Districts ("LACSD") pursuant to an Industrial Wastewater Discharge Permit (No. 516). The storm water includes flows from process and non-process areas of the Refinery, including tank farm areas, as well as municipal storm water that runs onto the Refinery from the City of Torrance.

3. ExxonMobil has no control over the quality or quantity of storm water that is received from the City. Municipal storm water typically accounts for as much as 25% of the storm water managed at the Refinery.

4. Water that is processed in the Refinery's wastewater treatment system, including storm water, undergoes treatment comprised of primary oil/water/solids separation prior to discharge to LACSD. During wet weather, the Industrial Wastewater Discharge Permit authorizes the Refinery to discharge up to 5,300 gpm to the sewer during "peak" hours (9:00 a.m. to 1:00 a.m.), and up to 10,000 gpm during "off-peak" hours (1:00 a.m. to 9:00 a.m.).

5. The "first flush" of storm water produced at the beginning of each significant rainfall event is directed to the Refinery's wastewater treatment system and discharged to LACSD. "First flush" storm water would be expected to contain a higher level of contaminants than storm water flows occurring later in the same storm event. ExxonMobil directs this water to the Refinery's wastewater treatment system (and thence to LACSD) as a Best Management Practice in order to minimize the discharge of pollutants to the Dominguez Channel.

6. During rain events that generate appreciable amounts of runoff, storm water (other than the "first flush") may be temporarily diverted into storm water collection facilities located at the Refinery if there is any reasonable possibility that the Refinery's wastewater treatment system would be overwhelmed by storm water flow, or that the flow limitations contained in Refinery's Industrial Discharge Permit might be exceeded. These collection facilities consist of several large retention basins and a tank with a combined

storage capacity of 38.2 million gallons. Water is diverted into these facilities by manually repositioning valves in the water lines that carry water to the wastewater treatment system.

7. Storm water in the retention basins and/or tank undergoes treatment (gravity oil/solids separation) and is discharged to the wastewater treatment system (and thence to LACSD) as quickly as possible after the conclusion of the storm event in order to maintain maximum available storage capacity in the collection facilities. In the vast majority of cases, 100% of the water that is diverted into the storm water collection facilities is eventually discharged to LACSD via the Refinery's wastewater treatment system.

8. ExxonMobil maintains an NPDES permit in order to be able to discharge storm water to the Dominguez Channel during extreme and/or prolonged storm events when there is an imminent risk that the Refinery's storm water retention capacity will be exceeded. In such circumstances, storm water is discharged to the Torrance Flood Control Lateral, which flows directly into the Dominguez Channel, in order to prevent flooding of the Refinery and the resulting safety and operational hazards that would ensue.

9. Flooding within the Refinery proper can cause significant operational and safety hazards, such as interference with equipment operation, unscheduled and/or emergency equipment shutdown, electrical hazards, slip and fall and other types of industrial accidents, sewer overflows, and crude oil or product releases.

10. Except as noted in Paragraph 11, during the past 12 years, the Refinery has discharged storm water to the Torrance Flood Control Lateral on only four occasions, two of which occurred during the 2004-2005 rainy season. I am informed and believe that the 2004-2005 rainy season was one of the wettest seasons on record in the Los Angeles area.

11. In February 2003, the Refinery experienced two other minor discharges of storm water as a result of an equipment (valve) malfunction upstream of the point of discharge. Although unanticipated, these discharges were not unpermitted and were reported in the Refinery's Discharge Monitoring Report. The defective valve has been repaired.

12. Although the Refinery's NPDES permit allows for the discharge of small amounts of steam condensate and Refinery washdown water to the Dominguez Channel, these streams are rarely, if ever, discharged and then only in extremely small quantities. Steam that is emitted by steam traps typically dissipates before it hits the ground. Any condensate that actually enters the storm water conveyance system is typically present only as moisture, without any measurable flow. In the case of washdown water, washdown operations are conducted only during dry weather, and the water is directed into a junction box which discharges to the oily sewer (and thence to the wastewater treatment system and LACSD). Any washdown water that might remain in the system at the beginning of a storm event would be included in the "first flush" and sent to the oily sewer. Water entering the system thereafter would be exclusively rainwater.

13. I am informed and believe that the existing retention basins at the Refinery have the ability to retain the amount of storm water that would be produced by a storm well in excess of a 25-year/24-hour storm event. I am further informed and believe that this significantly exceeds the "design storm" criterion around which most retention BMPs are designed.

14. ExxonMobil has evaluated the possibility of increasing the capacity of its storm water retention facilities, either by adding additional basins or increasing the size of the existing basins. The estimated cost of these alterations is in the many millions of dollars and is not considered cost-effective given the fact that the basins would be utilized only extremely rarely.

15. ExxonMobil already uses best available technology to treat storm water at the refinery. The vast majority of the storm water receives the same degree of treatment as process wastewater. Even the small amount of storm water that is discharged to the Dominguez Channel undergoes treatment by gravity oil/solids separation and is filtered through excelsior (wood wool) filters prior to discharge to the Channel. I am not aware of any other form of treatment that is technically feasible and cost-effective for treating highly

intermittent, high-volume storm water flows generated during extreme or prolonged storm events.

16. Crude oil does not contain bis(2-ethyl hexyl)phthalate (BEHP), nor is this compound found in any intermediate or refined product produced by the Refinery. BEHP is a common plasticizer and is found in plastic equipment used in wastewater sampling, handling and analysis. I believe that detections of BEHP in the Refinery's storm water are an artifact of the water sampling process, and are not associated with refining operations.

17. ExxonMobil previously operated a groundwater remediation system at the Refinery which discharged treated groundwater to the Dominguez Channel through a separate outfall. It is my belief that the xylene limit contained in the Refinery's prior NPDES permit (10 ug/l), and carried through to the current permit, was based on the level of treatment that could be achieved through the use of activated carbon adsorption technology commonly employed by groundwater remediation systems.

18. In 2003, ExxonMobil identified a way to internally recycle treated groundwater in the Refinery, obviating the need for discharge to the Dominguez Channel. Discharge of treated groundwater to the Channel was discontinued in 2003.

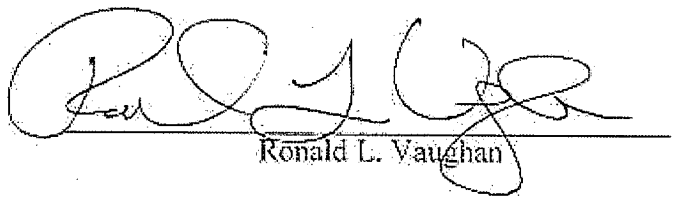
19. Chromium VI is not currently used at the Refinery and has not been used for many years. Although chromium VI was found in cooling water corrosion inhibitor chemicals that were commonly used in the industry in the 1970's, use of these chemicals was banned by EPA in 1994. I am informed and believe that the Refinery discontinued use of chromium VI corrosion inhibitors many years prior to 1994 in order to comply with the categorical effluent limitation guidelines.

20. Based on the storm water data that is available, it is my belief that ExxonMobil is unable to achieve compliance with most of the final numeric water quality-based effluent limitations contained in the permit, or with the technology-based limits for settleable solids, total suspended solids, turbidity, total petroleum hydrocarbons and xylene.

21. ExxonMobil did not waive any of its objections to the provisions of the permit that are being challenged in the Verified Petition for Review, and it is our

understanding, based on advice of counsel, that failure to request that the matter be removed from the Regional Board's consent calendar, at the adoption hearing on September 6, 2007, does not constitute a waiver of our right to file a petition for review with the State Board. No representative of ExxonMobil made any statement to any member of the Regional Board, or to any of its staff members, that could reasonably be interpreted or construed to constitute a waiver.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this 9th day October 2007, at Torrance, California.



Ronald L. Vaughan

California Regional Water Quality Control Board

Los Angeles Region

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

Linda S. Adams
Agency Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 Internet Address: http://www.waterboards.ca.gov/losangeles

Arnold Schwarzenegger
Governor

RECEIVED
SEP 21 2007
TORRANCE REFINERY MANAGER

September 11, 2007

Maxwell A. Ocansey, Refinery Manager
ExxonMobil Oil Corporation – Torrance Refinery
3700 West 190th Street
Torrance, CA 90509

VIA CERTIFIED MAIL
RETURNED RECEIPT REQUESTED
No. 7002 0860 0001 0651 1814

Dear Mr. Ocansey:

WASTE DISCHARGE REQUIREMENTS – EXXONMOBIL OIL CORPORATION (TORRANCE REFINERY), 3700 WEST 190TH STREET, TORRANCE, CA, NPDES NO.CA0055387, CI NO. 5742.

Our letters dated June 19, 2007, and August 21, 2007, transmitted a tentative order and a revised tentative order for renewal of your permit to discharge wastes under the National Pollutant Discharge Elimination System (NPDES).

Pursuant to Division 7 of the California Water Code, this Regional Board at a public hearing held on September 6, 2007, reviewed the revised tentative requirements, considered all factors in the case, and adopted Order No. R4-2007-0049 (copy attached) relative to this waste discharge. Order No. R4-2007-0049 serves as your permit under the NPDES and expires on August 10, 2012. Section 13376 of the California Water Code requires that an application for a new permit must be filed at least 180 days before the expiration date.

You are required to implement the *Monitoring and Reporting Program* (MRP) on the effective date of Order No. R4-2007-0049. Your first monitoring report for the October reporting period is due by February 1, 2008. All monitoring reports should be sent to the Regional Board, Attn: Information Technology Unit.

When submitting monitoring, technical reports, or any correspondence regarding the discharge under Order No. R4-2007-0049 to the Regional Board, please include a reference to *Compliance File No. CI 5742 and NPDES No. CA00055387,* which will assure that the reports are directed to the appropriate file and staff. Please do not combine your discharge monitoring reports with other reports. Please submit each type of report as a separate document.

We are sending the final copy of the permit only to the Discharger. For those on the mailing list who would like access to a copy of the final permit, please go to the Regional Board's website http://www.waterboards.ca.gov/losangeles/.

If you have any questions, please call Mazhar Ali at (213) 576-6652.

Sincerely,

Cassandra Owens, Chief
Industrial Permitting Unit

Enclosures:

cc: Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
U.S. Army Corps of Engineers
NOAA, National Marine Fisheries Service
Department of Interior, U.S. Fish and Wildlife Service
Mr. Philip Isorena , State Water Resources Control Board, Division of Water Quality
Mr. Michael Levy, State Water Resources Control Board, Office of Chief Counsel
Mr. William Paznokas, Department of Fish and Game, Region 5
Department of Health Services, Sanitary Engineering Section
California State Parks and Recreation
California Coastal Commission, South Coast Region
Water Replenishment District of Southern California
Los Angeles County, Department of Public Works, Waste Management Division
Los Angeles County, Department of Health Services
Dr. Mark Gold, Heal the Bay
Mr. Daniel Cooper, Lawyers for Clean Water
Ms. Tracy Egoscue, Santa Monica Baykeeper
Mr. David Beckman, Natural Resources Defense Council
Ms. Martha Rincon, County Sanitation Districts of Los Angeles County
Mr. Jae Kim, Tetra Tech

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

320 W. 4th Street, Suite 200, Los Angeles, California 90013
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http://www.waterboards.ca.gov/losangeles

ORDER NO. R4-2007-0049
NPDES NO. CA0055387

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	ExxonMobil Oil Corporation
Name of Facility	Torrance Refinery
Facility Address	3700 West 190th Street
	Torrance, CA 90509
	Los Angeles County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the ExxonMobil Oil Corporation from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Storm water from Torrance Refinery and the City of Torrance, and a small amount of steam condensate and process area washwater	33° 50' 54" N	118° 19' 01" W	Dominguez Channel through Torrance Lateral (Los Angeles County Flood Control Channel Project No. 537)

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	September 6, 2007
This Order shall become effective on:	October 6, 2007
This Order shall expire on:	August 10, 2012
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date.

IT IS HEREBY ORDERED, that Order No. 01-129 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted there under, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Deborah J. Smith, Interim Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on September 6, 2007.

for David A. Brehmanski, AEO

Deborah J. Smith, Interim Executive Officer

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	ExxonMobil Oil Corporation
Name of Facility	Torrance Refinery
Facility Address	3700 West 190th Street
	Torrance, CA 90509
	Los Angeles County
Facility Contact, Title, and Phone	Ron Vaughn, Water Advisor, (310) 212-4783
Mailing Address	SAME
Type of Facility	Petroleum Refinery
Facility Permitted Flow	Up to 10 million gallons per day (MGD) [1]

1. The Discharger is required to maintain an effluent flow of 10 MGD or less, except during an emergency storm event, wherein the rainfall or cumulative rainfalls that are equal to or greater than 24-hour, 50 year storm event. The Discharger may exceed a 10 mgd discharge to the receiving water, only after all storm water storage has been utilized and all steps have been taken to reduce the amount of storm water discharged into the receiving water. In the event of an emergency storm event (as defined in Attachment A definition) discharge, the Discharger shall continue to comply with effluent limitations for all pollutants.

II. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter Regional Water Board), finds:

A. **Background.** ExxonMobil Oil Corporation (hereinafter Discharger) is currently discharging pursuant to Order No. 01-129 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0055387. The Discharger submitted a Report of Waste Discharge (ROWD), dated February 9, 2006, and applied for an NPDES permit renewal to discharge storm water from the Torrance Refinery and the City of Torrance, and steam condensate. The application was deemed complete on February 9, 2006.

B. **Facility Description.** The Discharger owns and operates a petroleum refinery. All refinery process wastewater from the Facility is directed to a segregated oily water sewer system that flows to the County Sanitation Districts of Los Angeles County (CSDLAC) sewer system. The Facility's discharge consists of storm water from the Torrance Refinery and the City of Torrance, and low-volumes of steam condensate. The storm water management system consists of three surface impoundments and a storage tank. Depending on the severity of the storm, up to 10 million gallons per day (MGD) of wastewater (mainly storm water) is discharged from Discharge Point No. 001 (see table on cover page) to the Torrance Lateral (Los Angeles County Flood Control Channel Project No. 537), which flows into the Dominguez Channel within the Estuary, a water of the United States. Attachment B provides a topographic map of the area around the facility. Attachment C provides a flow schematic of the facility.

C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through I are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the CEQA, Public Resources Code sections 21100 – 21177.

F. **Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR)[1], require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet.

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

G. **Water Quality-based Effluent Limitations (WQBELs).** Section 301 of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

H. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan at 2-4 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Torrance Lateral (Los Angeles County Flood Control Channel Project No. 537), but does identify present and potential uses for the Dominquez Channel within the Estuary, to which Torrance Lateral is tributary. These beneficial uses are navigation; water contact recreation; non-contact recreation; commercial and/or sport fishing; estuarine habitat; marine habitat; wildlife habitat; preservation of rare, threatened, or endangered species; migration of aquatic organisms; and spawning, reproduction, or early development. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, as discussed in detail in the Fact Sheet (Attachment F), beneficial uses applicable to the Dominguez Channel Estuary are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel within the Estuary	Existing: Water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); estuarine habitat (EST); marine habitat (MAR); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); and spawning, reproduction, or early development (SPWN). Potential: Navigation (NAV).

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal* and *Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on

May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Resources Conrol Board (State Board) as Resolution No. 95-84 on November 16, 1995, states that:

> *"It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."*

While the discharge from the ExxonMobil Oil Corporation Torrance Refinery discharges into the Dominguez Channel, within the Estuary, the wastewater is comprised primarily of stormwater, and therefore is not considered to be industrial process wastewater. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

I. **Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, Amendment to the Water Quality Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including enclosed bays, estuaries and wetlands) with the Beneficial Use designations for protection of "Aquatic Life". The ammonia Basin Plan amendment was approved by the Office of Administrative Law (OAL) on September 14, 2004, and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with the USEPA "Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989." The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

The amendment contains objectives for a 4-day average concentration of un-ionized ammonia of 0.035 mg/L, and a 1-hour average concentration of un-ionized ammonia of 0.233 mg/L. The objectives are fixed concentrations of un-ionized ammonia, independent of pH, temperature, or salinity. The amendment also contains an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limitations.

No limitation for ammonia included in this Order because there is insufficient monitoring data to conduct reasonable potential analysis (RPA). The Order includes requirements for monitoring of ammonia for both effluent and receiving waters.

J. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later was amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR on February 13, 2001, was amended. These rules contain water quality criteria for priority pollutants.

K. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of*

California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

L. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 17, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Water Quality Control Plan for the Los Angeles Region, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective.

M. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR § 131.21, 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

N. **Antidegradation Policy.** Section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

O. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed.

P. **Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

Q. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

R. **Provisions and Requirements of Implementing State Law.** The provisions and requirements in subsections V.B, and VI.C of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

S. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

T. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

A. There shall be no discharge from the Facility to the receiving water except discharge of storm water from heavy rains from Torrance Refinery and the City of Torrance, and small amounts of steam condensate that are commingled with the storm water.

B. The discharge of wastes from accidental spills, treated groundwater or other sources is prohibited.

C. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, the Torrance Lateral and the Dominguez Channel, or other waters of the State, are prohibited.

D. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the Water Code.

E. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.

F. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA, and amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

G. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point No. 001

1. Final Effluent Limitations – Discharge Point No. 001

a. The discharge of storm water from Torrance Refinery and the City of Torrance, as well as steam condensate, shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP (Attachment E):

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	10[1]	--	--
Oil and grease	mg/L	15	--	--
Total Organic Carbon (TOC)	mg/L	110	--	--
Chromium (VI)	µg/L	83	--	--
Total Suspended Solids (TSS)	mg/L	75		
Turbidity	NTU	75		
Settleable Solids	ml/L	0.2		
Fecal Coliform	MPN/ 100 ml	[2]		
Xylene	µg/L	10	--	--
Copper	µg/L	5.8	--	--
Lead	µg/L	14	--	--
Zinc	µg/L	95	--	--
Nickel	µg/L	14	--	--
Mercury	µg/L	0.1	--	--
Total petroleum hydrocarbons[3]	µg/L	100		
Benzo(a)Anthracene	µg/L	0.1	--	--
Benzo(a)Pyrene	µg/L	0.1	--	--
Benzo(b)Fluoranthene	µg/L	0.1	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	12	--	--
pH	Units	--	6.5	8.5
Acute Toxicity	% survival	[4]		

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Temperature	°F	--	--	86

1. The Discharger is required to maintain an effluent flow of 10 MGD or less, except during an emergency storm event, wherein the rainfall or cumulative rainfalls that are equal to or greater than 24-hour, 50 year storm event. The Discharger may exceed a 10 mgd discharge to the receiving water, only after all storm water storage has been utilized and all steps have been taken to reduce the amount of storm water discharged into the receiving water. In the event of an emergency storm event (as defined in Attachment A definition) discharge, the Discharger shall continue to comply with effluent limitations for all pollutants.

2. The fecal coliform concentration shall not exceed a log mean of 200 MPN/100 ml (based on a minimum of not less than four samples for any 30-day period), nor shall more than 10 percent of total samples during any 30-day period exceed 400 MPN/100 ml.

3. Total petroleum hydrocarbons includes all fuels, gasoline, diesel and jet fuel. Analysis should be completed using EPA 418.1 and EPA 8015 (modified) methods.

4. The acute toxicity of the effluent shall be such that: (i) the average survival in undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and (ii) no single test producing less than 70% survival.

2. Interim Effluent Limitations– Discharge Point No. 001

a. During the period beginning October 6, 2007, and ending on May 17, 2010, the discharge of storm water from Torrance Refinery and the City of Torrance and steam condensate shall maintain compliance with the following limitations at Discharge Point No. 001, with compliance measured at Monitoring Location M-001 as described in the attached MRP (Attachment E). These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Table 7. Interim Limitations

Parameter	Units	Effluent Limitations
		Maximum Daily
Copper	µg/L	74
Lead	µg/L	279
Mercury	µg/L	0.3
Nickel	µg/L	34
Zinc	µg/L	495

Parameter	Units	Effluent Limitations
		Maximum Daily
Benzo(a)Anthracene	µg/L	2.2
Benzo(a)Pyrene	µg/L	2
Benzo(b)Fluoranthene	µg/L	1
Bis(2-Ethylhexyl)Phthalate	µg/L	30

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in the Dominguez Channel:

1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.5 units.

2. Depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.

3. Surface water temperature to rise greater than 5°F above the natural temperature of the receiving waters at any time or place. At no time the temperature be raised above 80^0 F as a result of waste discharged.

4. Exceed total ammonia (as N) concentrations specified in the Regional Water Board Resolution No. 2004-022. Resolution No. 2004-022 revised the ammonia water quality objectives for inland surface waters not characteristic of freshwater in the 1994 Basin Plan, to be consistent with USEPA's *"Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989."* Adopted on March 4, 2004, Resolution No. 2004-022 was approved by State Water Board, OAL and USEPA on July 22, 2004, September 14, 2004, and May 19, 2005, respectively and is now in effect.

5. There shall be no discharge of floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen on the surface of the receiving water..

6. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.

7. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.

8. Toxic or other deleterious substances in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

9. Accumulation of bottom deposits or aquatic growths.

10. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

11. The presence of substances that result in increases of BOD that adversely affect beneficial uses.

12. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.

13. Alteration of turbidity, or apparent color beyond present natural background levels.

14. Damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload the design capacity.

15. Degrade surface water communities and populations including vertebrate, invertebrate, and plant species.

16. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

17. Create nuisance, or adversely effect beneficial uses of the receiving water.

18. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

B. Groundwater Limitations

1. The Discharge shall not cause the underlying groundwater to be degraded, to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

VI. PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. Regional Water Board Standard Provisions. The Discharger shall comply with the following provisions:

   a. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

   b. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

   c. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

d. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the Federal CWA and amendments thereto.

e. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

f. Oil or oily material, chemicals, refuse, or other pollutionable materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

g. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.

h. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
   1) Violation of any term or condition contained in this Order;
   2) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
   3) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

i. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

j. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge appropriate filing fee.

k. The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

l. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

m. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.

n. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to $5,000 per day,

$10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

o. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

p. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

q. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

1) Name and general composition of the chemical,
2) Frequency of use,
3) Quantities to be used,
4) Proposed discharge concentrations, and
5) USEPA registration number, if applicable.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order. If there is any conflict between provisions stated in the MRP and the Regional Water Board Standard Provisions, those provisions stated in the MRP shall prevail.

C. Special Provisions

1. Reopener Provisions

a. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the reasonable potential analysis (RPA).

c. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new MLs.

d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for the Dominguez Channel:

e. This Order may be reopened, if dilution credit is granted by State Water Board and Regional Board.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. The Discharger shall submit to the Regional Water Board an Initial Investigation Toxicity Reduction Evaluation (TRE) workplan (1-2 pages) within 180 days of the effective date of this permit. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected, and should include at a minimum:

1) A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency;

2) A description of the facility's method of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility;

3) If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (Section V of the MRP, Attachment E, provides references for the guidance manuals that should be used for performing TIEs).

3. Best Management Practices and Pollution Prevention

The Discharger shall submit, within 180 days of the effective date of this Order:

a. An updated Storm Water Pollution Prevention Plan (SWPPP) that describes site-specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements in Attachment G. The SWPPP shall contain a Best Management Practice Plan (BMPP) that entail site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The updated BMPP shall be consistent with the general guidance contained in the USEPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004). In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material discharge to surface waters.

The plans shall cover all areas of the facility and shall include an updated drainage map for the facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge points (e.g., chemical storage areas); describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material; and address the feasibility of containment and/or treatment of the storm water.

b. An updated Spill Contingency Plan that shall be site-specific and shall cover all areas of the facility including the tank farms.

The Discharger shall implement the SWPPP and Spill Contingency Plan within 10 days of the approval by the Executive Officer. The plans shall be reviewed annually and at the same time. Updated information shall be submitted within 30 days of revision.

4. Spill Reporting Requirements

a. The Discharger shall develop and maintain a record of all spills, overflows or bypasses of raw or partially treated wastewater from its collection system or treatment plant. This record shall be made available to the Regional Water Board and USEPA upon request. On the first day of February, May, August and November (one month after the end of the fiscal quarter) of each year, the Discharger shall submit to the Regional Water Board and USEPA a report listing all spills, overflows or bypasses occurring during the previous quarter. The reports shall provide:

- the date and time of each spill, overflow or bypass;
- the location of each spill, overflow or bypass;
- the estimated volume of each spill, overflow or bypass including gross volume, amount recovered and amount not recovered;
- the cause of each spill, overflow or bypass;
- whether each spill, overflow or bypass entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;
- mitigation measures implemented;
- corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and
- beneficial uses impacted.

b. For certain spills, overflows and bypasses of untreated or partially treated wastewater caused by a failure in the collection or treatment system, the Discharger shall make reports and conduct monitoring as required below:

i. For any spills or overflows of any volume discharged where they are, or will probably be, discharged to waters of the State, the Discharger shall immediately notify the local health agency in accordance with California Health and Safety Code section 5411.5, and if feasible the appropriate Regional Water Board staff within 2 hours of the spill reaching receiving water.

ii. For spills, overflows or bypasses of any volume that flowed to receiving waters or entered a shallow ground water aquifer or has public exposure, the Discharger shall report such spills to the Regional Water Board, by telephone or electronically as soon as possible but not later than 24 hours of knowledge of the incident. The following information shall be included in the report, if known at that time: location; date and time of spill; volume and nature of the spill; cause(s) of the spill; mitigation measures implemented; and corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences.

iii. For any spills or overflows of 1000 gallons or more discharged where they are, or probably will be discharged to waters of the State, the Discharger shall immediately notify the State Office of Emergency Services pursuant to Water Code section 13271.

iv. For spills, overflows or bypasses of any volume that reach receiving waters, the Discharger shall obtain and analyze sufficient grab samples for fecal coliforms and relevant pollutants of concern that have discharge limits, upstream and downstream, or upcoast and/or downcoast, of the point of entry of the spill (if feasible, accessible and safe) in order to define the geographical extent of impact of the spill. The first set of samples shall be collected as soon as possible if feasible, accessible and safe. This monitoring shall be at least on a daily basis from time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to the background level or cessation of monitoring is authorized by the County Department of Health Services.

v. For spills, overflows or bypasses of any volume that reach receiving waters or have the potential to enter a shallow ground water aquifer, and all spills, overflows and bypasses of 1,000 gallons or more, the Discharger shall analyze a grab sample of the spill or overflow for fecal coliforms and relevant pollutants of concern depending on the area and nature of spills or overflows if feasible, accessible and safe.

vi. The Regional Water Board notification shall be followed by a written preliminary report five working days after verbal notification of the incident. Within 30 days after submitting preliminary report, the Discharger shall submit the final written report to this Regional Water Board. The written report shall document the information required in subparagraphs (b) and (d) above, monitoring results and any other information required in Provision V.E.1 of the Standard Provisions (Attachment D). An extension for submittal of the final written report can be granted by the Executive Officer for just cause. Submission of information required pursuant to California Water Code Section 13193 or pursuant to a Statewide General Waste Discharge Requirements for Wastewater Collection System Agencies shall satisfy this requirement.

5. Compliance Schedules

a. Compliance Plan

i. The interim limitations stipulated in section IV.A.2 of this Order for copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate shall be in effect until May 17, 2010. Thereafter, the Discharger shall comply with the limitations specified for copper, lead mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate in section IV.A.1 of this Order.

ii. The Discharger shall develop and submit, within one year of the effective date of this Order a compliance plan that will identify the measures that will be taken to reduce the concentrations of copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate in their discharge. This plan must evaluate options to achieve compliance with the final effluent limitations for nickel, mercury, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate within the deadline specified above.

iii. The Discharger shall submit annual reports to describe the progress of studies and or actions undertaken to reduce copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate in the effluent, and to achieve compliance with the limitations in this Order by the deadline specified above. The Regional Water Board shall receive the first annual progress report at the same time the annual summary report is due, as required in section X.D of the MRP (Attachment E).

b. Pollutant Minimization Plan (PMP).

The Discharger shall develop a PMP to maintain effluent concentrations of copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate at or below the effluent limitations specified in Final Effluent Limitations section IV.A.1.a of this Order. The PMP shall include the following:

i. Annual review and quarterly monitoring of the potential sources of copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate;

ii. Submittal of a control strategy designed to proceed toward the goal of maintaining effluent concentrations at or below the effluent limitation;

iii. Implementation of appropriate cost-effective control measures consistent with the control strategy;

iv. An annual status report that shall be sent to the Regional Water Board at the same time the annual summary report is submitted in accordance with section X.D of the MRP (Attachment E), and include:

(a) All PMP monitoring results for the previous year;

(b) A list of potential sources of copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate

(c) A summary of all actions undertaken pursuant to the control strategy;

(d) A description of actions to be taken in the following year.

6. Construction, Operation and Maintenance Specifications

a. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order

7. Special Provisions for Municipal Facilities (POTWs Only)

[Not applicable]

8. Other Special Provisions

a. Emergency Provision

The Discharger is required to maintain an effluent flow of 10 MGD or less, except during an emergency storm event, wherein the rainfall or cumulative rainfalls that are equal to or greater than 24-hour, 50 year storm event.. The Discharger may exceed a 10 mgd discharge to the receiving water, only after all storm water storage has been utilized and all steps have been taken to reduce the amount of storm water discharged into the receiving water. In the event of an emergency storm event (as defined in Attachment A definition) discharge, the Discharger shall continue to comply with effluent limitations for all pollutants.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. Single Constituent Effluent Limitation.
If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), then the Discharger is out of compliance.

B. Effluent Limitations Expressed as a Sum of Several Constituents.
If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

C. Effluent Limitations Expressed as a Median.
In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

1. If the number of measurements (n) is odd, then the median will be calculated as = $X_{(n+1)/2}$, or

2. If the number of measurements (n) is even, then the median will be calculated as = $[X_{n/2} + X_{(n/2)+1}]$, i.e. the midpoint between the n/2 and n/2+1 data points.

D. Multiple Sample Data.
When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or

both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

E. Maximum Daily Effluent Limitation (MDEL).
If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation.
If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation.
If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

ATTACHMENT A – DEFINITIONS

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Emergency Storm Event: a rainfall equal to, or greater than 24-hour, 50-year storm event.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

µg/L: micrograms per Liter

mg/L: milligrams per Liter

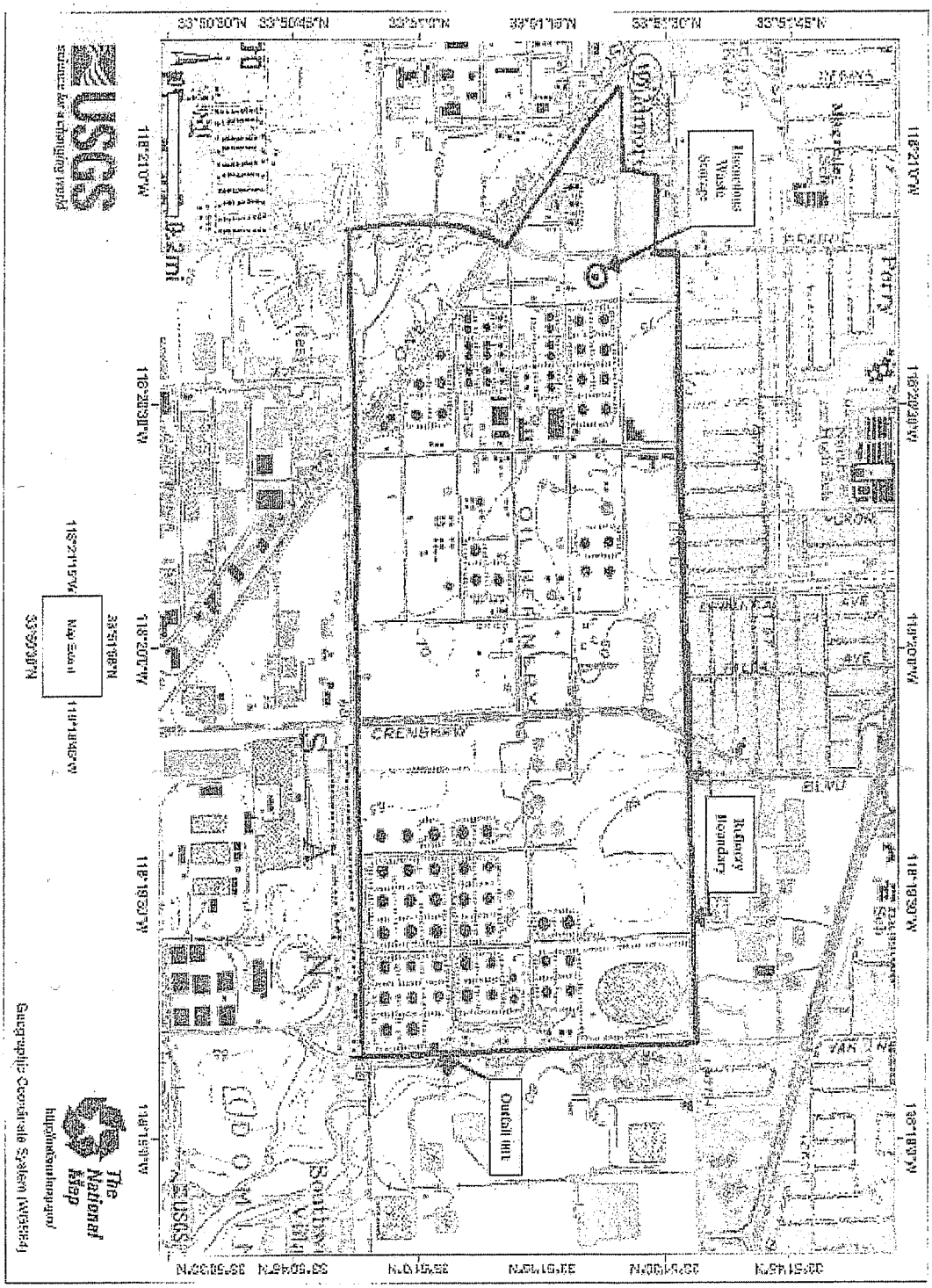
MGD: million gallons per day

ACRONYMS AND ABBREVIATIONS

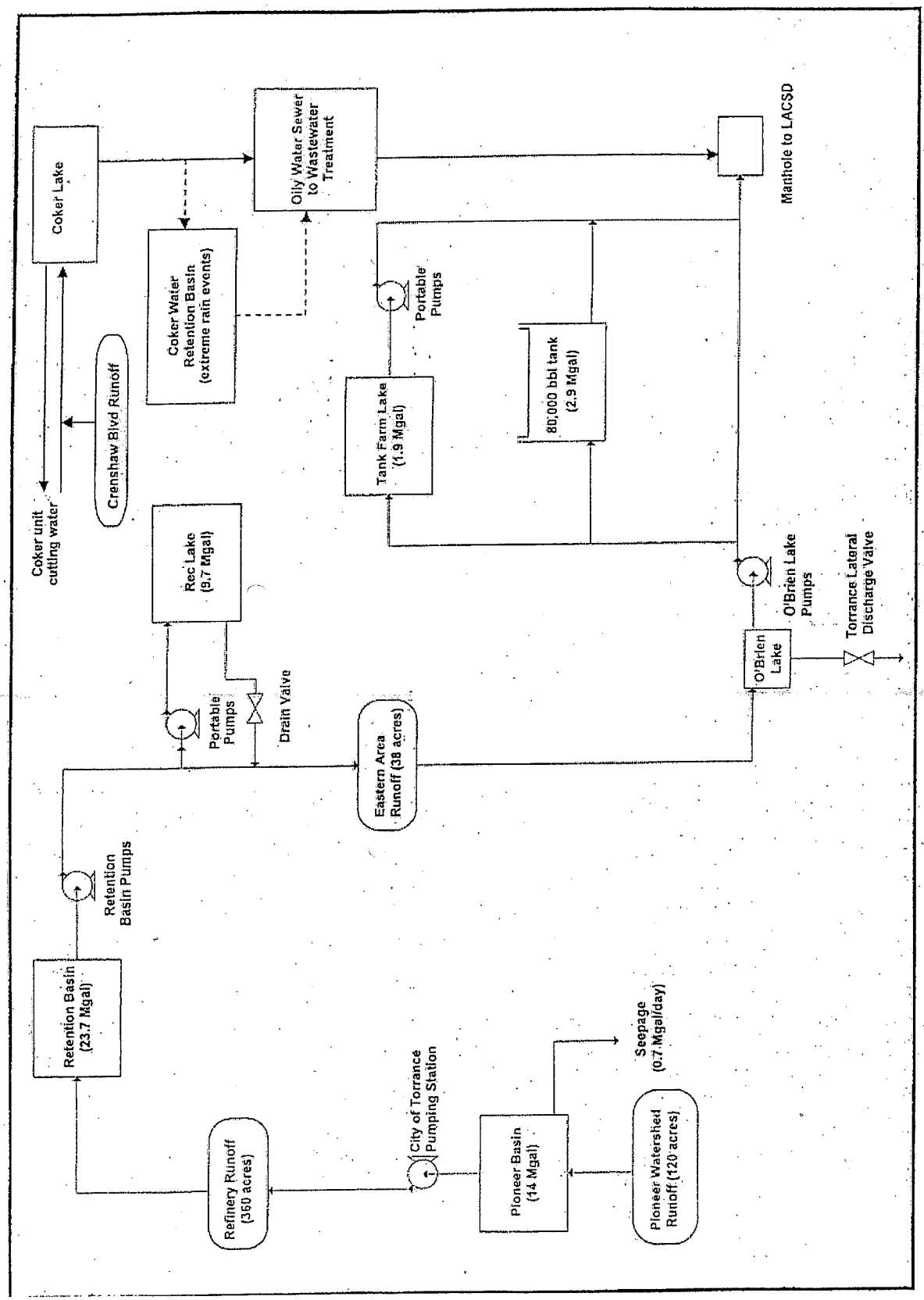
AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	*Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 °C
BPT	Best Practicable Treatment Control Technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
Discharger	ExxonMobil Oil Corporation
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	California Department of Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Torrance Refinery
gpd	gallons per day
IC	Inhibition Coefficient
IC_{15}	Concentration at which the organism is 15% inhibited
IC_{25}	Concentration at which the organism is 25% inhibited
IC_{40}	Concentration at which the organism is 40% inhibited
IC_{50}	Concentration at which the organism is 50% inhibited
LA	Load Allocations
LOEC	Lowest Observed Effect Concentration
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
MRP	Monitoring and Reporting Program
ND	Not Detected
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTR	National Toxics Rule
OAL	Office of Administrative Law
PMEL	Proposed Maximum Daily Effluent Limitation
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
QA	Quality Assurance

QA/QC	Quality Assurance/Quality Control
Ocean Plan	*Water Quality Control Plan for Ocean Waters of California*
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
SIP	State Implementation Policy (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)*
SMR	Self Monitoring Reports
State Water Board	California State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TAC	Test Acceptability Criteria
Thermal Plan	*Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California*
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solid
TU_c	Chronic Toxicity Unit
USEPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocations
WQBELs	Water Quality-Based Effluent Limitations
WQS	Water Quality Standards
%	Percent

ATTACHMENT B – TOPOGRAPHIC MAP



ATTACHMENT C – FLOW SCHEMATIC



Note: Dike area runoff is not shown. Runoff from dike areas is typically held up during the storm and does not enter surface drainage directly. However, dike area runoff can be pumped to Rec Lake for transfer to LACSD and/or Outfall 001.

ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the CWA and the Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [*section 122.41(a)*].

2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*section 122.41(a)(1)*].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [*section 122.41(c)*].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*section 122.41(d)*].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [*section 122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*section 122.41(g)*].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [*section 122.5(c)*].

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, USEPA, and/or their authorized representatives (including an authorized contractor acting as their representative),

upon the presentation of credentials and other documents, as may be required by law, to [*section 122.41(i)*] [*Water Code section 13383(c)*]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [*section 122.41(i)(1)*];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*section* 122.*41(i)(2)*];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*section 122.41(i)(3)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location [*section 122.41(i)(4)*].

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [*section 122.41(m)(1)(i)*].

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [*section 122.41(m)(1)(ii)*].

2. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5 below [*section 122.41(m)(2)*].

3. Prohibition of bypass – Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [*section 122.41(m)(4)(i)*]:

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*section 122.41(m)(4)(A)*];

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [*section 122.41(m)(4)(B)*]; and

   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [*section 122.41(m)(4)(C)*].

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [*section 122.41(m)(4)(ii)*].

5. Notice

   a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [*section 122.41(m)(3)(i)*].

   b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below [*section 122.41(m)(3)(ii)*].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [*section 122.41(n)(1)*].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [*section 122.41(n)(2)*].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [*section 122.41(n)(3)*]:

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*section 122.41(n)(3)(i)*];

   b. The permitted facility was, at the time, being properly operated [*section 122.41(n)(3)(i)*];

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*section 122.41(n)(3)(iii)*]; and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [*section 122.41(n)(3)(iv)*].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*section 122.41(n)(4)*].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a

notification of planned changes or anticipated noncompliance does not stay any Order condition [*section 122.41(f)*].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [*section 122.41(b)*].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*section 122.41(l)(3) and section 122.61*].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [*section 122.41(j)(1)*].

B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order [*section 122.41(j)(4) and section 122.44(i)(1)(iv)*].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [*section 122.41(j)(2)*].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [*section 122.41(j)(3)(i)*];
2. The individual(s) who performed the sampling or measurements [*section 122.41(j)(3)(ii)*];
3. The date(s) analyses were performed [*section 122.41(j)(3)(iii)*];
4. The individual(s) who performed the analyses [*section 122.41(j)(3)(iv)*];
5. The analytical techniques or methods used [*section 122.41(j)(3)(v)*]; and
6. The results of such analyses [*section 122.41(j)(3)(vi)*].

C. Claims of confidentiality for the following information will be denied [*40 CFR §122.7(b)*]:

1. The name and address of any permit applicant or Discharger [*section 122.7(b)(1)*]; and

2. Permit applications and attachments, permits and effluent data [*section 122.7(b)(2)*].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [*section 122.41(h)*] [*Water Code section 13267*].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, AND V.B.5 below [*section 122.41(k)*].

2. All permit applications shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*section 122.22(a)(1)*];

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*section 122.22(a)(2)*]; or

   c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [*section 122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in paragraph

(b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*section 122.22(b)(1)*];

b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [*section 122.22(b)(2)*]; and

c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [*section 122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, State Water Board or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [*section* 122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [*section 122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the MRP in this Order [*section 122.41(l)(4)*].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [*section 122.41(l)(4)(i)*].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*section 122.41(l)(4)(ii)*].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [*section 122.41(l)(4)(iii)*].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [*section 122.41(l)(5)*].

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [*section 122.41(l)(6)(i)*].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [*section 122.41(l)(6)(ii)*]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*section 122.41(l)(6)(ii)(A)*].

   b. Any upset that exceeds any effluent limitation in this Order [*section 122.41(l)(6)(ii)(B)*].

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*section 122.41(l)(6)(ii)(C)*].

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*section 122.41(l)(6)(iii)*].

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [*section 122.41(l)(1)*]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) [*section 122.41(l)(1)(i)*]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*section 122.41(l)(1)(ii)*].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*section 122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [*section 122.41(l)(2)]*.

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*section 122.41(l)(7)*].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information [*section 122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*section 122.41(a)(2)*] [*Water Code sections 13385 and 13387*].

B. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or

limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*section 122.41(a)(3)*].

C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [*section 122.41(j)(5)*].

D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [*section 122.41(k)(2)*].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [*section 122.42(a)*]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*section 122.42(a)(1)*]:

   a. 100 micrograms per liter (μg/L) [*section 122.42(a)(1)(i)*];

   b. 200 μg/L for acrolein and acrylonitrile; 500 μg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [*section 122.42(a)(1)(ii)*];

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*section 122.42(a)(1)(iii)*]; or

   d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*section 122.42(a)(1)(iv)*].

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*section 122.42(a)(2)*]:

   a. 500 micrograms per liter (μg/L) [*section 122.42(a)(2)(i)*];

   b. 1 milligram per liter (mg/L) for antimony [*section 122.42(a)(2)(ii)*];

   c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*section 122.42(a)(2)(iii)*]; or

d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*section 122.42(a)(2)(iv)*].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [*section 122.42(b)*]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [*section 122.42(b)(1)*]; and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [*section 122.42(b)(2)*].

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [*section 122.42(b)(3)*].

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 5742

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. An effluent sampling station shall be established for the point of discharge (Discharge Point M-001 [Latitude 33°50'54", Longitude 118°19'01"]) and shall be located at O'Brien Lake which is upstream of the Parshall flume, where representative samples of that effluent can be obtained.

B. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.

C. The Regional Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.

D. Pollutants shall be analyzed using the analytical methods described in sections 136.3, 136.4, and 136.5 (revised March 12, 2007); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

E. For any analyses performed for which no procedure is specified in the USEPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

F. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the Department of Health Services or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this MRP".

G. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML; or

2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or,

3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

Analytical data reported as "less than" for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

Current MLs (Attachment G) are those published by the State Water Board in the Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, March 2, 2000.

H. Where possible, the MLs employed for effluent analyses shall be lower than the permit limitations established for a given parameter. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

The Regional Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment G to be included in the Discharger's permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment G;

2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 CFR Part 136 (revised May 14, 1999);

3. When the Discharger agrees to use an ML that is lower than that listed in Attachment G;

4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment G, and proposes an appropriate ML for their matrix; or,

5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the USEPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

I. Water/wastewater samples must be analyzed within allowable holding time limits as specified in section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.

J. All analyses shall be accompanied by the laboratory report, including but not limited to: chain of custody, which includes the date and time of sampling, sample identification, and name of person who performed sampling; date of analysis; name of person who performed analysis; QA/QC data; method detection limits; analytical methods; copy of laboratory certification; and a perjury statement executed by the person responsible for the laboratory.

K. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments to insure accuracy of measurements; or the Discharger shall insure that both equipment activities will be conducted.

L. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. The annual monitoring report required in Section X.D shall also summarize the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per sampling period, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.

M. When requested by the Regional Water Board or USEPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.

N. For parameters that both average monthly and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide a program to ensure future compliance with the average monthly limit for the approval by the Executive Officer.

O. In the event wastes are transported to a different disposal site during the report period, the following shall be reported in the monitoring report:

1. Types of wastes and quantity of each type;

2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and

3. Location of the final point(s) of disposal for each type of waste.

If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted. Monitoring and Reporting Program do not apply when storm water is discharged to the CSDLAC, per normal operations.

P. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	M-001	Effluent: Prior to discharge to the Torrance Lateral (Latitude 33°50'54", Longitude 118°19'01").
--	R-001	Receiving water: 250 feet upstream from the confluence of the Torrance Flood Control Lateral with Dominguez Channel.
--	R-002	Receiving water: 250 feet downstream from the confluence of the Torrance Flood Control Lateral with Dominguez Channel.
--	R-003	Receiving water: 50 feet downstream from the confluence of the Torrance Flood Control Lateral with Dominguez Channel.
--	S-001	Sediment: At intersection of the Dominguez Channel and Anaheim Road.
--	S-002	Sediment: At intersection of the Dominguez Channel and Pacific Coast Highway.
--	S-003	Sediment: At intersection of the Dominguez Channel and Sepulveda Boulevard.
--	S-004	Sediment: At intersection of the Dominguez Channel and Alameda Street.
--	S-005	Sediment: At intersection of the Dominguez Channel and Wilmington Avenue.
--	S-006	Sediment: At intersection of the Dominguez Channel and Avalon Boulevard.
--	S-007	Sediment: At intersection of the Dominguez Channel and Main Street.

III. INFLUENT MONITORING REQUIREMENTS

[Not Applicable]

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

1. The Discharger shall monitor the storm water discharge at M-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

Table E-2. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Flow	mgd	---	Daily[1]	
Temperature	°F	Grab	once per discharge event[2]	[3]
pH	pH units	Grab	once per discharge event[2]	[3]
Hardness (as $CaCO_3$)	mg/L	Grab	once per discharge event[2]	[3]
Oil and Grease	mg/L	Grab	once per discharge event[2]	[3]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total suspended solids	mg/L	Grab	once per discharge event[2]	3
Settleable solids	ml/L	Grab	once per discharge event[2]	3
Chemical oxygen demand (COD)	mg/L	Grab	once per discharge event[2]	3
Turbidity	NTU	Grab	once per discharge event[2]	3
Total organic carbon (TOC)	µg/L	Grab	once per discharge event[2]	3
Total petroleum hydrocarbons [4]	µg/L	Grab	once per discharge event[2]	3
Fecal Coliform	MPN/100 ml	Grab	once per discharge event[2]	3
Chromium (VI)	µg/L	Grab	once per discharge event[2]	3
Total Chromium	µg/L	Grab	once per discharge event[2]	3
Copper	µg/L	Grab	once per discharge event[2]	3
Lead	µg/L	Grab	once per discharge event[2]	3
Zinc	µg/L	Grab	once per discharge event[2]	3
Acute Toxicity	% survival	Grab	once per discharge event[2]	3
Ammonia (as N)	mg/L	Grab	once per discharge event[2]	3
BTEX[5]	µg/L	Grab	once per discharge event[2]	3
Mercury	µg/L	Grab	once per discharge event[2]	3
Nickel	µg/L	Grab	once per discharge event[2]	3
Silver	µg/L	Grab	once per discharge event[2]	3
Thallium	µg/L	Grab	once per discharge event[2]	3
Benzo(a)Anthracene	µg/L	Grab	once per discharge event[2]	3
Benzo(a)Pyrene	µg/L	Grab	once per discharge event[2]	3
Benzo(b)Fluoranthene	µg/L	Grab	once per discharge event[2]	3
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	once per discharge event[2]	3
Remaining Priority Pollutants [6,7]	µg/L	Grab	once per year[8]	3

1. Flow shall be recorded daily during each period of discharge.
2. During periods of discharge, samples should be collected during the first hour of the discharge. Each separate period of discharge shall be sampled, but no more than one sample per week is required. For acute toxicity, no more than one sample per quarter is required.
3. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.
4. TPH analysis shall be limited to Gasoline range organics (GRO) fraction using EPA 8015 (modified) method.
5. Benzene, toluene, ethylbenzene, and xylene
6. Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment I.
7. Must analyze pH and hardness of the receiving water at the same time the samples are collected for priority pollutants.
8. Samples should be collected during the first hour of the discharge during the first discharge event of the calendar year. If possible, samples shall be collected at the same time as the receiving water sampling for priority pollutants.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Definition of Toxicity

1. Acute Toxicity.
Acute toxicity is a measure of primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

   a) The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and

   b) No single test shall produce less than 70% survival.

B. Acute Toxicity Effluent Monitoring Program

1. Effluent samples shall be collected from M-001.

2. The Discharger shall conduct acute toxicity tests on effluent grab samples by methods specified in Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, USEPA, Office of Water, Washington D.C. (EPA/821-R-02-012) or a more recent edition to ensure compliance in 100 % effluent.

3. The topsmelt, *Atherinops affinis,* shall be used as the test species. The culturing methods, test temperature and salinity ranges for topsmelt are found in USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms,* First Edition, August 1995 (EPA/600/R-95/136). All other conditions of the tests, including test acceptability criteria, shall be as specified in the acute toxicity guidance. A test duration of 96 hours shall be used.

C. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

2. A survival rate of 90 percent or greater in the 100% effluent exposure should be considered a passing result regardless of control or reference toxicant performance.

3. Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

D. Accelerated Monitoring and Initial Investigation TRE Trigger

1. Special Provision VI.C.2.a of the Order requires the Discharger to develop and submit for approval an Initial Investigation TRE Workplan.

2. If the results of a toxicity test exceed the acute toxicity effluent limitations (as defined below):

Acute Toxicity:

(a) The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and

(b) No single test shall produce less than 70% survival.

then, the Discharger shall begin the investigation and evaluation as specified in the Dischargers's Initial Investigation TRE Workplan and begin accelerated monitoring by conducting six additional tests, in as close of a time frame as possible (however limited to one monitoring event per discharge event).

3. If implementation of the Initial Investigation TRE Workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger may discontinue the Initial Investigation Toxicity Reduction Evaluation and resume routine testing frequency.

E. TRE/TIE Trigger

A TIE is required when a greater toxicity signal (70% or less survival) is consistently observed.

F. Steps in TRE and TIE Procedures

1. Following a TRE trigger, the Discharger shall initiate a TRE in accordance with the facility's Initial Investigation TRE workplan. At a minimum, the Discharger shall use USEPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. The Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of the trigger, which will include, but not be limited to:

   a. Further actions to investigate and identify the cause of toxicity;

   b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;

   c. Standards the Discharger will apply to consider the TRE complete and to return to normal sampling frequency; and,

   d. A schedule for these actions.

2. The following is a stepwise approach in conducting the TRE:

   a. Step 1 - Basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;

   b. Step 2 - Evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals;

   c. Step 3 – If Steps 1 and 2 are unsuccessful, Step 3 implements a TIE by employing all reasonable efforts and using currently available TIE methodologies. The Discharger shall use the USEPA acute and chronic manuals, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) as guidance. The objective of the TIE is to identify the substance or combination of substances causing the observed toxicity;

d. Step 4 – Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options;

e. Step 5 evaluates in-plant treatment options; and,

f. Step 6 consists of confirmation once a toxicity control method has been implemented.

Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of implementation of these control measures may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the facility's TRE workplan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there is no longer toxicity (or six consecutive acute toxicity test results are greater than 90% survival).

3. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.

4. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance determination, if appropriate.

5. The Regional Water Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

G. Reporting

1. The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported as % survival for acute toxicity test results and as TU_c for chronic toxicity test results with the self monitoring reports (SMR) for the month in which the test is conducted.

2. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, then those results also shall be submitted with the SMR for the period in which the investigation occurred.

   a. The full report shall be submitted on or before the end of the month in which the SMR is submitted.

   b. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limit or chronic toxicity limit or trigger and (4) printout of the ToxCalc or CETIS (Comprehensive Environment Toxicity Information System) program results.

3. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. Routine reporting shall include, at a minimum, as applicable, for each test:

   a. Sample date(s);

b. Test initiation date;
c. Test species;
d. End point values for each dilution (e.g., number of young, growth rate, percent survival);
e. NOEC value(s) in percent effluent;
f. IC_{15}, IC_{25}, IC_{40} and IC_{50} values in percent effluent;
g. TU_c values $\left(TU_c = \frac{100}{NOEC}\right)$;
h. Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable);
i. NOEC and LOEC values for reference toxicant test(s);
j. IC25 value for reference toxicant test(s);
k. Any applicable charts; and
l. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).

4. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from all samples collected during that year.

   The Discharger shall notify by telephone or electronically, this Regional Water Board of any toxicity exceedance of the limit or trigger within 24 hours of receipt of the results followed by a written report within 14 calendar days of receipt of the results. The verbal or electronic notification shall include the exceedance and the plan the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

[Not Applicable]

VII. RECLAMATION MONITORING REQUIREMENTS

[Not Applicable]

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Monitoring Location R-001

Receiving water sampling shall be conducted at the same time as the effluent monitoring. If no effluent discharge occurs, receiving water sampling be conducted twice during the permit term. The Discharger shall monitor the Dominguez Channel at R-001 as follows:

Table E-3. Monitoring Requirements for R-001

Parameter[1]	Units	Sample Type	Minimum Sampling Frequency
Temperature	°F	Grab	Once per discharge event[2]
pH[3]	Units	Grab	Once per discharge event[2]
Dissolved Oxygen	mg/L	Grab	Once per discharge event[2]
Hardness ($CaCO_3$)[3]	mg/L	Grab	Once per discharge event[2]
Ammonia (as N)	mg/L	Grab	Once per discharge event[2]
Priority Pollutants[4,5]	µg/L	Grab	yearly[6]

1 Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 4 of the

SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

2 Sampling shall be conducted during discharge events to the Dominguez Channel but no less than once per year. During extended periods of discharge, no more than one sample per week needs to be collected. Sampling shall be as soon as practicable after the beginning of a discharge, but in no case more than 48 hours after discharge begins. If, for safety reasons, a sample cannot be collected within this time period, the samples will be collected as soon as practicable after conditions are deemed safe by the Discharger.

3 Must analyze pH and hardness of the receiving water at the same time the samples are collected for priority pollutants.

4 Priority Pollutants as defined by the CTR defined in Finding II.I of this Order. The MLs are for the priority pollutants are available in Appendix 4 of the SIP.

5 Shall be monitored concurrently with effluent Priority Pollutant monitoring specified in Section IV.A.1 of this MRP, Attachment E.

6 Sampling shall be conducted during discharge events to the Dominguez Channel but no less than once per year. During extended periods of discharge, no more than one sample per week needs to be collected. Sampling shall be as soon as practicable after the beginning of a discharge, but in no case more than 48 hours after discharge begins. If, for safety reasons, a sample cannot be collected within this time period, the samples will be collected as soon as practicable after conditions are deemed safe by the Discharger. Sampling shall be conducted once per year or no more than twice during the permit term if there is no effluent discharge.

B. Monitoring Location R-002 and R-003

1. The Discharger shall monitor the Dominguez Channel at R-002 and R-003 as follows:

Table E-4. Monitoring Requirements for R-002 and R-003

Parameter[1]	Units	Sample Type	Minimum Sampling Frequency
Temperature	°F	Grab	Once per discharge event[2]
pH	Units	Grab	Once per discharge event[2]
Ammonia (as N)	mg/L	Grab	Once per discharge event[2]
Dissolved Oxygen	mg/L	Grab	Once per discharge event[2]

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.
2. Sampling shall be conducted during discharge events to the Dominguez Channel but no less than once per year. During extended periods of discharge, no more than one sample per week needs to be collected. Sampling shall be as soon as practicable after the beginning of a discharge, but in no case more than 48 hours after discharge begins. If, for safety reasons, a sample cannot be collected within this time period, the samples will be collected as soon as practicable after conditions are deemed safe by the Discharger.

C. Visual Monitoring of Upstream and Downstream Receiving Water Sampling Points

1. A visual observation station shall be established, if possible, during effluent discharge, in the vicinity of the discharge point of the storm drain to the receiving water, the Dominguez Channel.

2. Visual observations shall be made of the receiving water during collection of receiving water monitoring sample. All receiving water observations shall be reported in the quarterly monitoring report. Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials are apparent. The following observations shall be made:

   a. Tidal stage, time, and date of monitoring
   b. Weather conditions
   c. Color of water
   d. Appearance of oil films or grease, or floatable materials
   e. Extent of visible turbidity or color patches
   f. Direction of tidal flow
   g. Description of odor, if any, of the receiving water
   h. Presence and activity of California Least Tern and California Brown Pelican.

D. Sediment Monitoring Stations S-001 through S-007

1. Sediment samples shall be collected and analyzed from the seven sediment monitoring stations (S-001 through S-007) annually. Sediment monitoring may be performed in conjunction with other dischargers to the Dominguez Channel.

2. Grab samples containing the upper two centimeters of sediment shall be taken from an Ekman grab sampler (or another method approved by the Executive Officer) collected at each station. Pollutants shall be analyzed using the analytical methods described in "Test Methods for Evaluating Solid Waste Physical/Chemical Methods" or SW-846. If no methods

are specified for a given pollutant, use methods approved by this Regional Water Board or the State Water Board. Sediment samples shall be analyzed for the following parameters:

Table E-5. Sediment Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Sediment Grain Size	[1]	surface grab	annually
Total Organic Carbon	mg/kg	surface grab	annually
Total Petroleum Hydrocarbons	mg/kg	surface grab	annually
Cadmium	mg/kg	surface grab	annually
Chromium	mg/kg	surface grab	annually
Copper[2]	mg/kg	surface grab	annually
Lead[2]	mg/kg	surface grab	annually
Nickel	mg/kg	surface grab	annually
Zinc	mg/kg	surface grab	annually
PCBs[3]	µg/kg	surface grab	annually
PAHs[4]	µg/kg	surface grab	annually
DDT[5]	µg/kg	surface grab	annually
Description of odor and color	[6]	surface grab	annually

1 Percent sand, silt, and clay.
2 Monitor only at stations S-001 through S-003
3 The sum of Aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016.
4 The sum of Acenaphthene, Fluoranthene, Naphthalene, Benzo(a) anthracene, Benzo(b) fluoranthene, Benzo(k) fluoranthene, Benzo(ghi) perylene, Dibenzo(a,h) anthracene, Chrysene, Acenaphthylene, Anthracene, Fluorene, Pyrene, Phenanthrene, and Indo(1,2,3-cd) pyrene.
5 The sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, and 2,4'-DDD
6 Note visible aquatic life in sediment.

IX. OTHER MONITORING REQUIREMENTS

A. Storm Water Monitoring

1. Rainfall Monitoring. The Discharger shall measure and record the rainfall on each day of the month. This information shall be included in the monitoring report for that month. If the rainfall monitoring device is out of service, the Discharger may include local rainfall data from the Torrance airport.

2. Visual Observation. The Discharger shall make visual observations at sampling location M-001 or at the discharge point from the facility to TFCL on at least one storm event per month that produces a significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A "significant storm water discharge" is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period.

B. SWPPP and Spill Contingency Plan Status and Effectiveness Report

1. As required under Special Provision VI.C.3 of this Order, the Discharger shall submit an updated SWPPP and Spill Contingency Plan to the Executive Officer of the Regional Water Board for approval within 180 days of the effective date of this permit

2. Annually the Discharger shall report the status of the implementation and the effectiveness of the SWPPP and Spill Contingency Plan Status required under Special Provision VI.C.3 of this Order. The SWPPP and Spill Contingency Plan Status shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of pollutants in wastewater and storm water discharged from the facility are addressed in the SWPPP and Spill Contingency Plan Status. All changes or revisions to the SWPPP and Spill Contingency Plan Status will be summarized in the annual report required under Attachment E, Monitoring and Reporting, Section X.D.

C. Chemical Use Report

1. The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect the waste discharge, including quantities of each.

2. The Discharger shall report annually summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the facility and which are discharged or have the potential to be discharged.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. If there is no discharge during any reporting period, the report shall so state.

3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements

5. The Discharger shall report the results of acute toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, Section V.E.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs. Until such notification is given, the Discharger shall submit SMRs in accordance with the requirements described below.

2. The Discharger shall submit quarterly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
quarterly	October 6, 2007	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
yearly	October 6, 2007	January 1 through December 31	February 1
Once per discharge event	First day of discharge after October 6, 2007	Once per discharge	November 1 February 1 May 1 August 1

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in section 136.

5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. Where applicable, the Discharger shall include results of receiving water observations.

6. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

7. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

8. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

   California Regional Water Quality Control Board
   Los Angeles Region
   320 W. 4th Street, Suite 200
   Los Angeles, CA 90013

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B of this MRP, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit SMRs. Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

1. Within 180 days of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:

   a. Initial Investigation TRE workplan
   b. Updated SWPPP
   c. Spill Contingency Plan

2. The Discharger shall submit an annual PMP status report to the Regional Water Board in accordance with VI.C.5.b. of the Order.

3. As discussed in Section VI.C.5.a. of the Order, the Discharger shall submit within 1 year of the effective date of this permit a Compliance Plan.

4. By March 1 of each year, the Discharger shall submit an annual report to the Regional Water Board. The report shall contain the following:

   a. Both tabular and graphical summaries of the monitoring data obtained during the previous year,

   b. A discussion on the compliance record and the corrective actions taken or planned to bring the discharge into full compliance with the waste discharge requirements,

   c. A report discussing the following: 1) operation/maintenance problems; 2) changes to the facility operations and activities; 3) potential discharge of the pollutants associated with the changes and how these changes are addressed in the BMPP; 3) calibration of flow meters or other equipment/device used to demonstrate compliance with effluent limitations of this Order.

   d. A report summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the facility and which are discharged or have the potential to be discharged (See Section IX.C of the MRP, Attachment E).

   e. A report on the status of the implementation and the effectiveness of the SWPPP, BMPP, and Spill Contingency Plan.

5. As discussed in Section IX.C of the MRP, Attachment E, the Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including

quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

6. If the Discharger wishes to participate in a coordinated receiving water, biomonitoring, and sediment monitoring program with other dischargers to the Dominguez Channel, then, as discussed in Section X.D.6 of the MRP, Attachment E, the Discharger shall submit a report seeking approval of the Regional Water Board.

7. This Regional Water Board requires the Discharger to file with the Regional Water Board, within 180 days after the effective date of this Order, a technical report on his preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report should:

   a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

   b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.

   c. Describe facilities and procedures needed for effective preventive and contingency plans.

   d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

   This Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions may be incorporated as part of this Order, upon notice to the Discharger.

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ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1 Facility Information

WDID	4B192079002
Discharger	ExxonMobil Oil Corporation
Name of Facility	Torrance Refinery
Facility Address	3700 West 190th Street
	Torrance, CA 90509
	Los Angeles County
Facility Contact, Title and Phone	Ron Vaughan, Water Advisor, (310) 212-4783
Authorized Person to Sign and Submit Reports	Maxwell A. Ocansey, Refinery Manager, (310) 212-4500
Mailing Address	SAME
Billing Address	SAME
Type of Facility	Petroleum Refining-2911
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	C
Pretreatment Program	N/A
Reclamation Requirements	N/A
Facility Permitted Flow	10 million gallons per day (MGD) [1]
Facility Design Flow	N/A
Watershed	Dominquez Channel Watershed
Receiving Water	Torrance Lateral to Dominguez Channel within Estuary
Receiving Water Type	Estuary

1. The Discharger is required to maintain an effluent flow of 10 MGD or less, except during an emergency storm event, wherein the rainfall or cumulative rainfalls that are equal to or greater than 24-hour, 50 year storm event. The Discharger may exceed a 10 mgd discharge to the receiving water, only after all storm water storage has been utilized and all steps have been taken to reduce the amount of storm water discharged into the receiving water. In the event of an emergency storm event (as defined in Attachment A definition) discharge, the Discharger shall continue to comply with effluent limitations for all pollutants.

A. ExxonMobil Oil Corporation (hereinafter Discharger) is the owner and operator of the Torrance Refinery (hereinafter Facility), a petroleum refinery.

For purposes of this Order, references to the "Discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater to the Torrance Lateral (Los Angeles County Flood Control Channel 587), a tributary to the Dominguez Channel, a water of the United States, and is currently regulated by Order No. 01-129 which was adopted on September 19, 2001, and expired on August 10, 2006. 40 CFR Part 122.6, "Continuation of expiring permits", stipulates that the conditions of an expired permit continue in full force until the effective date of the new permit, if the permittee has submitted a timely application which is complete and the Regional Administrator, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date. The Discharger submitted a timely application, thus the permit continued in full force and effect.

C. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on February 9, 2006. Supplemental information requesting a mixing zone and dilution credits was submitted by the Discharger on May 1, 2006. Compliance Evaluation Inspection was conducted on January 12, 2007, that also served as a site visit to collect information for permit reissuance.

II. FACILITY DESCRIPTION

The Torrance Refinery receives a daily average crude throughput of 160,000 barrels per day. At the Facility, crude petroleum is processed into refined products including gasoline, diesel fuel, and jet fuel. Coke and sulfur are produced and sold as by-products of the refining process. The refinery processes include crude cracking, flashing, coking, hydrotreating, alkylation, reforming, and sulfur recovery.

A. Description of Wastewater and Biosolids Treatment or Controls

The Facility's discharge consists of storm water from the Torrance Refinery and the City of Torrance, as well as relatively low-volumes of steam condensate. The facility's permitted flow is 10 mgd (based on maximum discharge of storm water during the last ten years). In the past, treated groundwater at the site was also discharged by the Facility. Due to concerns about the types and levels of contaminates in the groundwater at the Facility, ExxonMobil entered into a judicial consent decree with USEPA, which required chronic toxicity studies and investigations of the treated groundwater. Groundwate reuse project was initiated in 2003 as a result of the consent decree and ceased all discharges of treated groundwater to surface water.

All refinery process wastewater from the Facility is directed to a segregated oily water sewer system that flows to the County Sanitation Districts of Los Angeles County (CSDLAC) sewer system. Storm drains in process areas are collected in a storm sewer. The water collected in the storm sewer during small rain runoff events is also sent to CSDLAC. When the storm runoff is diverted from the oily water sewers to storm water storage, the runoff is directed to the Retention Basin.

Storm water runoff from the area around the Facility is collected in a 24 million gallon unlined Retention Basin. The storm water in the Retention Basin is directed to Reclamation Lake well before the Retention Basin would reach capacity in order to maximize the ability to retain storm water. Storm water from Reclamation Lake goes to O'Brien Lake. Flows from O'Brien Lake are preferentially pumped to the CSDLAC sewer; storm water from O'Brien Lake that cannot be managed at the CSDLAC sewer would be directed to either Tank Farm Lake or to dedicated tankage prior to making a decision to open the valve to the Torrance Flood Control Lateral (TFCL) when there is no more storage capacity in the system.

In addition to storm water runoff from the refinery areas, storm water from off-site areas is collected in Pioneer Basin (with a storage capacity of 14 million gallons). Pioneer Basin receives drainage from west of Prairie, the runoff from Crenshaw Boulevard directly enters the refinery's storm water conveyances that flow into the refinery's Retention Basin. Pioneer Basin discharges are managed by an established procedure developed with the City of Torrance to optimize the use of the detention capabilities for the Pioneer Basin. This procedure allows periodic discharge of Pioneer Basin water prior to reaching an overflow level so that the refinery can best manage the storm water via the CSDLAC sewer or the Retention Basin.

There are two field valves located upstream of the Retention Basin. These valves remain open during dry weather and smaller rain events to divert storm water entering the storm drains to the oily water sewer. When the valves are closed during larger storms, the storm water is directed to the Retention Basin. These two field valves are operated independently of the valve at O'Brien Lake, which is kept in a closed position and only opened due to excessive rains at the Torrance Refinery and City of Torrance in order to discharge storm water to the TFCL .

Storm water reaching O'Brien Lake is preferentially pumped to the CSDLAC sewer. Storm water at O'Brien Lake that cannot be managed at the CSDLAC sewer would be directed to either Tank Farm Lake or to dedicated tankage prior to making a decision to open the valve to the TFCL. Discharge to the TFCL and then to the Dominguez Channel occurs only during extended storm events when the storm water storage basins are full and flooding of the Facility is imminent (the storm event exceeds the 24-hour, 50-year storm event). Prior to discharge from O'Brien Lake to the Torrance Lateral, storm water passes through Excelsior (hay) filters.

Since 2003 (after the groundwater discharge was eliminated) the Facility discharged three times to the Torrance Lateral.

Coker Lake is located on the west side of the Tank Farm in the Coke Handling Area. It accumulates overflow water from the Coke Handling Facility and storm water run off from both the Coke Handling Area and Crenshaw Boulevard (from the City of Torrance). During normal situations, the level is maintained by recycling the water back to the Coker Unit. During heavy rain events, water is pumped to the tank drainage system and directed to the wastewater treatment plant. In extreme flood situations, storm water may be routed to the Coke Water Retention Basin, then to the wastewater treatment plant, prior to discharge to CSDLAC.

Significant materials that could be exposed to storm water are petroleum hydrocarbon compounds associated with refining operations and steam condensate. Storm water runoff from the City of Torrance will contain pollutants typically found in urban sources, including oil and grease, solids, bacteria, and trace metals.

Chemical additives used in the refining processes, utility systems, and solid and hazardous waste are stored so that rainfall runoff does not contact them. The storm water pollution prevention plan implemented by the Discharger specifies best management practices to prevent such chemicals from being contacted by runoff.

B. Discharge Points and Receiving Waters

The previous Order contained Discharge Points No. 001a (treated groundwater), 001b (untreated storm water with steam condensate and process area washwater), and 001 (representing the combination of discharge from 001a and 001b). The refinery has not discharged treated groundwater through Discharge Point No.001a since 2003. Only storm water and a small amount of steam condensate are discharged though the Discharge Point No. 001b. This Order designates Discharge Point No. 001 as the discharge point for storm water from the Torrance Refinery and the City of Torrance, as well as relatively low-volumes of steam condensate.

Effluent is discharged through Discharge Point No. 001 (Latitude: 33° 50' 54" N, Longitude: 118° 19' 01" W) to the Torrance Lateral (Los Angeles County Flood Control Channel Project No. 537), which flows into the Dominguez Channel within the estuary.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the previous Order for discharges from Discharge Point Nos. 001a (treated groundwater), 001b (untreated storm water with steam condensate and process area washwater), and 001 (representing the combination of discharge from 001a and 001b) are summarized in Tables F-2, F-3 and F-4, below.

Table F-2. Summary of Effluent Limitations (Order No. 01-129) for Discharge Point No. 001a

Parameter	Units	Effluent Limitations[1]	
		Average Monthly[2]	Maximum Daily
Oil and Grease	mg/L	10	15
	lbs/day	250.2	375.3
Settleable Solids	ml/L	0.1	0.2
Turbidity	NTU	50	75
Suspended Solids	mg/L	50	75
	lbs/day	1251.1	1876.5
Biochemical Oxygen Demand (BOD_5) (5-day @ 20 Deg. C)	mg/L	20	30
	lbs/day	500.4	750.6
Residual Chlorine	mg/L	--	0.1
	lbs/day	--	2.5
Chromium (VI)	µg/L	41.1	82.5
	lbs/day	1.03	2.06
Arsenic	µg/L	29.4	59.0
	lbs/day	0.736	1.48
Copper [3,4]	µg/L	2.88	5.77
	lbs/day	0.0721	0.144
Copper [3,5]	µg/L	103	256
	lbs/day	2.58	6.41
Benzene	µg/L	--	1.0
	lbs/day	--	0.025
Toluene	µg/L	--	10

Parameter	Units	Effluent Limitations[1]	
		Average Monthly[2]	Maximum Daily
	lbs/day	--	0.25
Ethylbenzene	µg/L	--	10
	lbs/day	--	0.25
Xylene	µg/L	--	10
	lbs/day	--	0.25
Naphthalene	µg/L	0.031	0.031
	lbs/day	7.75E-04	7.75E-04
Lead [3,4]	µg/L	6.96	13.96
	lbs/day	0.174	0.349
Lead[3,5]	µg/L	56.2	99.4
	lbs/day	1.42	2.50
Zinc [3,4]	µg/L	47.3	94.9
	lbs/day	1.18	2.37
Zinc[3,5]	µg/L	94	136
	lbs/day	2.35	3.40
Chronic Toxicity	TU_C	1.0	--

1 The mass emission for a pollutant was calculated based on a discharge flow rate of 3 mgd for treated groundwater.
2 The monthly average concentration shall be the arithmetic average of all the values of daily concentrations calculated using the results of analyses of all samples collected during the month. If only one sample is taken within that month, compliance shall be based on this sample result
3 Metal limits pertain to total recoverable concentrations.
4 Final effluent limitations.
5 These "Interim Limitations" applied to these constituents until August 10, 2006.

Table F-3. Summary of Effluent Limitations (Order No. 01-129) for Discharge Point No. 001b

Parameter	Units	Effluent Limitations[1]	
		Average Monthly	Maximum Daily
Oil and Grease	mg/L	--	15
TOC	mg/L	--	110
Total Chromium	mg/L	--	0.6
Fecal Coliform	MPN/100mL	[1]	
Xylene	µg/L	--	10
Chromium (VI)	µg/L	--	82.5
Copper [2,3]	µg/L	--	5.77
Copper[2,4]	µg/L	--	74
Lead [2,3]	µg/L	--	13.96
Lead [2,4]	µg/L	--	279
Zinc [2,3]	µg/L	--	94.9
Zinc [2,4]	µg/L	--	495

1 Fecal coliform concentration shall not exceed a log mean of 200 MPN/100 mL (based on a minimum of not less than four samples for consecutive discharge days), nor shall more than 10 percent of the total samples during the consecutive discharge days exceed 400 MPN/100 mL.
2 Metal limits pertain to total recoverable concentrations.

[3] Final effluent limitations.
[4] These "Interim Limitations" applied to these constituents until August 10, 2006.

Table F-4. Summary of Effluent Limitations (Order No. 01-129) for Discharge Point No. 001

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
pH	Units	6.5-8.5	
Temperature	°F	--	100
Acute Toxicity	% survival	[1]	

[1] The acute toxicity of the effluent shall be such that (i) the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and (ii) no single test shall result in less than 70% survival.

D. Compliance Summary

This section provides a compliance summary for the storm water discharge. Since the Facility ceased the discharge of treated groundwater in 2003 and there was no data available, treated groundwater discharge was not analyzed for the compliance summary.

Table F-5. Summary of Compliance History

Date	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
12/29/04	Maximum	Xylene	27	10	µg/L
12/29/04	Maximum	Zinc	619	495	µg/L
1/5/05	Minimum	Acute Toxicity	0	70	% survival
1/5/05	Maximum	Xylene	34	10	µg/L
2/19/05	Minimum	Acute Toxicity	0	70	% survival
2/19/05	Maximum	Xylene	27	10	µg/L

Identified violations are being evaluated for appropriate enforcement actions.

E. Planned Changes

[Not Applicable]

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the CWC (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provision of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The facility discharges to the Dominguez Channel through the Torrance Lateral (Los Angeles County Flood Control Channel Project No. 537). Beneficial uses applicable to the Dominguez Channel Estuary are as follows:

Table F-6. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel within the Estuary	Existing: Water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); estuarine habitat (EST); marine habitat (MAR); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); migration of aquatic organisms (MIGR); and spawning, reproduction, or early development (SPWN). Potential: Navigation (NAV).

The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Resources Conrol Board (State Board) as Resolution No. 95-84 on November 16, 1995, states that:

> *"It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."*

While the discharge from the ExxonMobil Oil Corporation Torrance Refinery discharges into the Dominguez Channel, within the Estuary, the wastewater is comprised primarily of stormwater, and therefore is not considered to be industrial process wastewater. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

2. **Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, *Amendment to the Water Quality Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including enclosed bays, estuaries and wetlands) with the Beneficial Use designations for protection of "Aquatic Life".* The ammonia Basin Plan amendment was approved by the State Water Board on July 22, 2004, Office of Administrative Law on September 15, 2004, and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with USEPA's *"Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989."* The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

   For inland surface waters not characteristic of freshwater (including enclosed bays, estuaries, and wetlands), the proposed objectives are a 4-day average concentration of unionized ammonia of 0.035 mg/L, and a 1-hour average concentration of unionized ammonia of 0.233 mg/L. The proposed objectives are fixed concentrations of unionized ammonia, independent of pH, temperature, or salinity. The proposed amendment includes an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limits. The proposed amendment also simplifies the implementation procedures for translating ammonia objectives into effluent limits in situations where a mixing zone has been authorized by the Regional Water Board. Finally, the proposed amendment revises the implementation procedure for determining saltwater, brackish or freshwater conditions, to be consistent with the proposed objectives. The proposed objectives will apply only to inland surface waters not characteristic of freshwater (including enclosed bays, estuaries and wetlands) and do not impact the Ammonia Water Quality Objectives for ocean waters contained in the California Ocean Plan.

   No limitation for ammonia included in this Order because there is insufficient monitoring data to conduct reasonable potential analysis (RPA). The Order includes requirements for monitoring of ammonia for both effluent and receiving waters.

3. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of the Order implement the Thermal Plan.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

5. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives

established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board, on February 24, 2005, adopted amendments to the SIP that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

6. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

7. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution No. 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings.

   The 2006 State Water Board's California 303(d) List classifies the Dominguez Channel Estuary (unlined portion below Vermont Ave) as impaired. The pollutants of concern include ammonia, benthic community effects, benzo(a)pyrene (PAHs), benzo(a)anthracene, chlordane (tissue), chrysene (C1-C4), coliform bacteria, DDT (tissue & sediment), dieldrin (tissue), lead (tissue), PCBs (Polychlorinated biphenyls), phenanthrene, pyrene, and zinc (sediment). The effluent limits in the permit for constituents with reasonable potential are established to protect the beneficial uses of Dominguez Channel and to ensure that the discharge does not degrade its water quality. Also, this permit requires receiving water monitoring for priority pollutants, even if there is no discharge from the facility. This information will be used to complete a reasonable potential analysis (RPA) of all priority pollutants. The permit also includes Reopener Provision which allows revision of effluent limitations for toxic pollutants based on the results of RPA. To date no TMDLs have been developed; therefore, no conditions in the tentative Order are based on TMDLs.

   The discharge is not a new discharge. Discharges only occur in emergency situations, during prolonged periods of rain when the storm water runoff collected cannot be discharged to the sanitary sewer. Since 2003, there has only been three discharges from the Facility to Dominguez Channel. The discharge is also temporally limited, lasting only during the storm event that necessitated the discharge. Potential treatment technologies are being evaluated for storm water treatment prior to discharge to ensure that the WQBELs are met.

   This NPDES permit includes effluent limits to ensure that the discharge does not adversely impact the beneficial uses of Dominguez Channel or degrade water quality. The inclusion of the effluent limits and prohibitions in the NPDES permit, which ensure that any discharge would not result in the lowering of water quality, coupled with the fact that the discharge occurs infrequently and is temporally limited, support the conclusion that no degradation will arise as a result of reissuing this permit. The issuance of this permit, therefore, is consistent with the state's antidegradation policy.

8. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[1] section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. The reissued permit is more stringent than the previous permit.

D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Regional Water Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA approved the State's 2006 303(d) list of impaired water bodies on October 25, 2006. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2006 303(d) list and have been scheduled for TMDL development.

The 2006 State Water Board's California 303(d) List classifies the Dominguez Channel Estuary (unlined portion below Vermont Ave) as impaired. The pollutants of concern include ammonia, benthic community effects, benzo(a)pyrene (PAHs), benzo(a)anthracene, chlordane (tissue), chrysene (C1-C4), coliform bacteria, DDT (tissue & sediment), dieldrin (tissue), lead (tissue), PCBs (Polychlorinated biphenyls), phenanthrene, pyrene, and zinc (sediment). To date no TMDLs have been developed; therefore, no conditions in the tentative Order are based on TMDLs.

E. Other Plans, Polices and Regulations

[Not Applicable]

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR §122.44(d) requires that permits include water quality-based effluent limits (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established. Three options exist to protect water quality: 1) 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

The CWA requires that any pollutant that may be discharged by a point source in quantities of concern must be regulated through an NPDES permit. Further, the NPDES regulations require

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

regulation of any pollutant that (1) causes; (2) have the reasonable potential to cause; or (3) contribute to the exceedance of a receiving water quality criteria or objective.

The Facility refines crude petroleum into refined products including gasoline, diesel fuel, and jet fuel. The pollutants of concern are petroleum hydrocarbon compounds associated with refining operations. In addition, a negligible amount of steam condensate and process area washwater are also discharged and may add solids, oil and grease, phenolic compounds, chromium (VI), and pH. Effluent limitation guidelines for storm water runoff which is not commingled with the refinery's process water contain oil and grease, total organic carbon, and total petroleum hydrocarbons. Urban runoff from the City of Torrance will contain pollutants including oil and grease, trace metals and solids. Also pH and temperature are pollutants of concern because the discharge of the storm water from the industrial site has the potential to affect pH and temperature of the receiving water. When the previous Order was issued, oil and grease, total organic carbon, xylene, chromium, copper, lead, zinc, pH and temperature were pollutants of concern for storm water runoff. Since the Facility operations have not changed in regards to the storm water discharge, these pollutants continue to be pollutants of concern in this Order.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 CFR §122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitations on a case-by-case basis, limitations based on mass are infeasible because the mass or pollutant cannot be related to a measure of production.

The Facility discharges to the Torrance Lateral only during heavy rainfall periods. Due to the intermittent nature of the discharge, and the fact that the flow is determined by the amount of rainfall, this Order does not contain mass- based effluent limitations.

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and are consistent with the requirements set for other discharges regulated by NPDES permit to the Dominguez Channel.

B. Technology-Based Effluent Limitations

1. Scope and Authority

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

In the previous Order, technology-based effluent limitations for contaminated runoff from the petroleum refining facility were calculated pursuant to 40 CFR Part 419. Since the storm water runoff is not commingled or treated with the refinery's process wastewater, the more stringent of the following requirements were used as the basis for the limitations for oil and grease and total organic carbon (TOC) in the storm water runoff:

40 CFR §419.22(e) (1) - BPT requirements (15 mg/L for oil and grease; 110 mg/L for TOC)
40 CFR §419.23(f) (1) - BAT requirements (110 mg/L for TOC)
40 CFR §419.24(e) (1) - BCT requirements (15 mg/L for oil and grease)

Other BPJ based limits include settleable solids, turbidity, TSS, and total petroleum hydrocarbons.

This Order includes technology-based effluent limitations based on anti-backsliding for xylene. Since the previous Order contained a xylene limitation, and based on the nature of the discharge, xylene would be expected to be present in the discharge. Therefore, in accordance with State and federal anti-backsliding regulations, an effluent limitation for xylene has been carried over to the tentative Order. Information regarding the water quality-based effluent limitations for copper, chromium (VI), lead, zinc, temperature and pH are contained in Section IV.C of this fact sheet

The previous Order noted that the facility had implemented a *Storm Water Pollution Prevention Plan* (SWPPP) in accordance with the general NPDES permit for storm water discharges associated with industrial activity (State Water Board Order No.97-02-DWQ, NPDES permit No. CAS000001). This Order requires the Discharger to update and continue to implement its SWPPP. The SWPPP shall outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into the storm drain. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water in the undiked areas, and that all storm water

within the diked areas is contained within the diked areas at all times, treated by the pretreatment system, and discharged to the sanitary sewer system.

This Order requires the Discharger to update and continue to implement their Spill Prevention Control and Countermeasures (SPCC) Plan.

Table F-7. Summary of Technology-based Effluent Limitations: Discharge Point No. 001

Parameter	Units	Effluent Limitations
		Maximum Daily
Oil and Grease	mg/L	15
Turbidity	NTU	75
Total Suspended Solids	mg/L	75
Settleable Solids	ml/L	0.2
Total petroleum hydrocarbons	µg/L	100
TOC	mg/L	110
Xylene	µg/L	10

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

The specific procedures for determining reasonable potential and, if necessary, for calculating WQBELs are contained in the USEPA *Technical Support Document for Water Quality-based Toxics Control* (TSD) for storm water discharges and in the SIP for non-storm water discharges. However, the TSD states that "an analogous approach developed by a regulatory authority can be used to determine the reasonable potential" (for storm water discharges). The Regional Water Board has determined that the procedures for determining reasonable potential and calculating WQBELs contained in the

SIP for non-storm water discharges may also be used to evaluate reasonable potential and calculate WQBELs for storm water discharges as well. Hence, in this Order, the Regional Water Board has used the SIP methodology to evaluate reasonable potential for storm water discharges through Discharge Point No. 001.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

As noted in Section II of the Limitations and Discharge Requirements, the Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to the Dominguez Channel Estuary are summarized in Section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to the Dominguez Channel. The CTR contains both saltwater and freshwater criteria. The Dominguez Channel at the point of the discharge is classified as the Dominguez Channel Estuary. Therefore, the CTR criteria for saltwater or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Dominguez Channel, a water of the United States in the vicinity of the discharge.

Table F-8 summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the reasonable potential analysis (RPA) for this Order.

Table F-8. Applicable Water Quality Criteria

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Saltwater		Freshwater		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
5b	Chromium (VI)	50.35	1,107.75	50.35	N/A			--
6	Copper	3.73	5.78	3.73				--
7	Lead	8.52	220.82	8.52				--
8	Mercury	0.05	--	--				0.05
9	Nickel	8.28	74.75	8.28				4,600
11	Silver	2.24	2.24	--				--
12	Thallium	6.3	--	--				6.3
13	Zinc	85.62	95.14	85.62				--
19	Benzene	71	--	--				71
33	Ethylbenzene	29,000	--	--				29,000
39	Toluene	200,000	--	--				200,000
58	Anthracene	110,00	--	--				110,000
60	Benzo(a)Anthracene	0.049	--	--				0.049
61	Benzo(a)Pyrene	0.049	--	--				0.049
62	Benzo(b)Fluoranthene	0.049	--	--				0.049
68	Bis(2-Ethylhexyl)Phthalate	5.9	--	--				5.9

86	Fluoranthene	370	--	--		370
87	Fluorene	14,000	--	--		14,000
99	Phenanthrene	No criteria	--	--		--
100	Pyrene	11,000	--	--		11,000

"N/A" indicates the receiving water body is not characterized as freshwater, nor are the water quality criteria for the protection of human health for the consumption of water and organisms applicable.

3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a RPA for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Regional Water Board identifies the MEC and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

1) Trigger 1 – If the MEC ≥C, a limit is needed.

2) Trigger 2 – If the background concentration (B) > C and the pollutant is detected in the effluent, a limit is needed.

3) Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. Seven monitoring data sets were originally available for Discharge Point No. 001 when the Facility discharged to the Torrance Lateral. They were based on five effluent monitoring and two interim effluent monitoring data sets collected between 2003 and 2005. In the previous Order the Discharge was permitted to discharge groundwater and storm water through Discharge Point No. 001. Since the Facility ceased discharging groundwater in 2003, only four sets of data were considered to be representative for the storm water RPA analysis: December 29, 2004; January 5, 2005 and February 19, 2005. Receiving water data used for the RPA included: March 26, 2004; August 24, 2004, February 25, 2005; August 26, 2005; February 14, 2006; and August 24, 2006. Based on the RPA, pollutants that demonstrated reasonable potential were copper, lead, mercury,

nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene and bis(2-ethylhexyl)phthalate for the discharge through Discharge Point No. 001. Though there was no reasonable potential for chromium (VI) to exceed water quality criteria based on one detected value, chromium (VI) is a pollutant commonly associated with petroleum refining operations and it is a more toxic form of chromium. Therefore, in accordance with Section 1.3 of the SIP (Step 7), the Regional Board has determined that there is a reasonable potential and this Order includes a WQBEL for chromium (VI).

Table F-9. Summary Reasonable Potential Analysis

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		µg/L	µg/L	µg/L		
5b	Chromium(VI)	50.35	11	--	Yes	[1]
6	Copper	3.73	39.8	10.3	Yes	MEC>C
7	Lead	8.52	171	<2.36	Yes	MEC>C
8	Mercury	0.05	0.262	<0.067	Yes	MEC>C
9	Nickel	8.28	33.5	5.18	Yes	MEC>C
11	Silver	2.24	--	3.44	No	Ud[2]
12	Thallium	6.3	--	6.31	No	Ud[2]
13	Zinc	85.62	619	27.3	Yes	MEC>C
19	Benzene	71	21	<0.1	No	MEC<C
33	Ethylbenzene	29,000	4.1	<0.077	No	MEC<C
39	Toluene	200,000	33	<0.091	No	MEC<C
58	Anthracene	110,000	4.2	<0.011	No	MEC<C
60	Benzo(a)Anthracene	0.049	2.2	<0.02	Yes	MEC>C
61	Benzo(a)Pyrene	0.049	1.9	<0.012	Yes	MEC>C
62	Benzo(b)Fluoranthene	0.049	0.83	<0.024	Yes	MEC>C
68	Bis(2-Ethylhexyl)Phthalate	5.9	30	<1.8	Yes	MEC>C
86	Fluoranthene	370	5.5	<0.028	No	MEC<C
87	Fluorene	14,000	6.7	<0.038	No	MEC<C
99	Phenanthrene	No criteria	15	<0.015	No	--
100	Pyrene	11,000	12	<0.027	No	MEC<C

[1] In accordance with Section 1.3 of the SIP (Step 7).
[2] Undetermined due to lack of data.

4. WQBEL Calculations

a. If reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in Section 1.4 of the SIP. These procedures include:

1) If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).
2) Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
3) Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

b. Water quality-based effluent limits (final) for these pollutants are established following the procedure based on the steady-state model, available in Section 1.4 of the SIP.

c. ExxonMobil submitted a Mixing Zone Study on May 1, 2006. If dilution credit is granted, then the Order will be opened. The Dominguez Channel is on 303 (d) list for benzo(a)pyrene, benzo(a)anthracene, coliform, lead, phenanthrene, pyrene, and zinc (sediment), among other pollutants, no dilution credit is being considered in this tentative Order.

d. WQBELs Calculation Example

Using zinc as an example, the following demonstrates how WQBELs were established for this Order. The tables in Attachment J summarize the development and calculation of all WQBELs for this Order using the process described below.

A set of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL.

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criteria determine the effluent concentration allowance (ECA) using the following steady state equation:

$ECA = C + D(C-B)$ when $C > B$, and
$ECA = C$ when $C < B$,

Where
- C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a pH of 7.19 was used for pH-dependant criteria.
- D = The dilution credit, and
- B = The ambient background concentration

As discussed above, for this Order, dilution was not allowed; therefore:

$ECA = C$

For zinc the applicable water quality criteria are (reference Table F-8):

ECA_{acute}= 95.14 μg/L
$ECA_{chronic}$= 85.62 μg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute\ 99}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic\ 99}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For zinc, the following data was used to develop the acute and chronic LTA using equations provided in Section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA $Multiplier_{acute\ 99}$	ECA $Multiplier_{chronic\ 99}$
4	0.6	0.32108	0.52743

LTA_{acute} = 95.14 μg/L x 0.32108 = 30.55 μg/L

$LTA_{chronic}$ = 85.62 μg/L x 0.52743 = 45.15 μg/L

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$

For copper, the most limiting LTA was the LTA_{acute}

LTA = 30.55 μg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as a Average Monthly Effluent Limitation (AMEL) and Maximum Daily Effluent Limitation (MDEL). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life}$ = LTA x $AMEL_{multiplier\ 95}$

$MDEL_{aquatic\ life}$ = LTA x $MDEL_{multiplier\ 99}$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For zinc , the following data was used to develop the AMEL and MDEL for aquatic life using equations provided in Section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$
4	0.6	3.1145	1.5524

$AMEL_{aquatic\ life}$ = 30.55 x 1.5524 = 47.42 μg/L

$MDEL_{aquatic\ life}$ = 30.55 x 3.1145 = 95.137 µg/L

Calculation of human health AMEL and MDEL:

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

$AMEL_{human\ health} = ECA_{human\ health}$

However, for zinc:

The $ECA_{human\ health}$ for human health was not available. The zinc water quality criterion protective of human health for the consumption of water and organisms does not apply, as the receiving water does not support municipal and domestic supply (MUN) as an existing beneficial use. Therefore only the water quality criterion protective of human health for the consumption of organisms is applicable. However, since the CTR does not contain a numeric zinc criterion protective of human health for the consumption of organisms (only), it was not possible to develop zinc AMEL based on human health criteria.

Step 6: A zinc $MDEL_{human\ health}$ could not be calculated because a zinc $AMEL_{human\ health}$ was not available. However, for illustrative purposes, if a $AMEL_{human\ health}$ was available, the following data and equation would have been used to develop the $MDEL_{human\ health}$:

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.60	3.11	1.55	2.01

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

For zinc :

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
47.42 µg/L	95.14 µg/L	Not Applicable	Not Applicable

The lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order. For zinc there is no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs. These limits will be protective of aquatic life.

5. WQBELs based on Basin Plan Objectives

The Basin Plan states that the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge. Based on the requirements of the Basin Plan an instantaneous minimum limitation of 6.5 and an instantaneous maximum limitation of 8.5 for pH are included in the proposed permit. The Basin Plan lists temperature requirements for the receiving waters and references the Thermal Plan. Based on the requirements of the Thermal Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*, a maximum effluent temperature limitation of 86 °F is included in the proposed permit. The white paper evaluated the

optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The new temperature effluent limit is reflective of new information available that indicates that the 100°F temperature is not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86°F temperature was found to be protective. The Basin Plan states that "in waters designated for water contact recreation, the fecal coliform concentration shall not exceed a log mean of 200/100 mL (based on a minimum of not less than four samples for any 30-day period), nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 mL".

Ammonia exists in two forms - un-ionized ammonia (NH_3) and the ammonium ion (NH_4). They are both toxic, but the neutral, un-ionized ammonia species (NH_3) is much more toxic. The form of ammonia is primarily a function of pH, but it is also affected by temperature and other factors.

There is insufficient monitoring data to determine ammonia has reasonable potential to cause or contribute to an excursion of a water quality objective. Therefore, no limit is given but the Discharger is required to monitor ammonia.

6. Final WQBELs

A summary of WQBELs are described in Table F-10.

Table F-10. Summary of Water Quality-based Effluent Limitations: Discharge Point No. 001

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper, Total Recoverable	µg/L	5.8	--	--
Chromium (VI)	µg/L	83	--	--
Lead, Total Recoverable	µg/L	14	--	--
Zinc, Total Recoverable	µg/L	95	--	--
Nickel, Total Recoverable	µg/L	14	--	--
Mercury, Total Recoverable	µg/L	0.1		
Benzo(a)Anthracene	µg/L	0.1	--	--
Benzo(a)Pyrene	µg/L	0.1	--	--
Benzo(b)Fluoranthene	µg/L	0.1	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	12	--	--
Fecal Coliform	MPN/100 mL	[1]		
pH	Units	--	6.5	8.5
Temperature	°F	--	--	86

[1]Fecal coliform concentration shall not exceed a log mean of 200 MPN/100 mL (based on a minimum of not less than four samples for consecutive discharge days), nor shall more than 10 percent of the total samples during the consecutive discharge days exceed 400 MPN/100mL.

7. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing Order contains acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90 percent, with no single test having less than 70 percent survival. Annual acute toxicity data for the years 2003 through 2005 submitted by the Discharger showed 100, 73, 0 and 0 percent survival rates. Consistent with Basin Plan requirements, this Order carries over the acute toxicity limitations and monitoring requirements from the previous Order.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

Since the discharge from the Discharge Point No. 001 is an intermittent discharge, it is not expected to contribute to long-term toxic effects within the receiving water. Therefore, no chronic toxicity effluent limitation will be required in this Order.

D. Final Effluent Limitations

Section 402(o) of the CWA and 40 CFR §122.44(l) require that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Orders based on the submitted sampling data. Effluent limitations for oil and grease, TOC, fecal coliform, xylene, pH, and acute toxicity are being carried over from the previous Order (Order No. 01-129). Removal of these numeric limitations would constitute backsliding under CWA section 402(o). The Regional Water Board has determined that these numeric effluent limitations continue to be applicable to the Facility. Effluent limitations for temperature have been revised to reflect WQO changes in the Basin Plan and Thermal Plan. A discharge flow of 10 million gallons per day (MGD) has been established based on maximum flow discharged in the past. Effluent limitations for chromium (VI), copper, lead, zinc, mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate were calculated because the Facility's discharge was found to have reasonable potential to exceed water quality criteria for these parameters. The recalculated values for copper, lead and zinc are slightly higher than the existing limitations for Discharge Point No.001b in the previous Order No.01-129. In accordance with anti-backsliding requirements, the MDELs for copper, lead and zinc have been carried over to this Order. Since the maximum effluent concentration (MEC) for total chromium was well below MDEL of 0.6 mg/l for total chromium in the previous Order, and there are no water quality criteria available to perform a reasonable

potential analysis, effluent limitations for total chromium will be removed from this Order. However, the Facility will be required to continue to sample and analyze for total chromium to monitor the levels when a discharge does occur. Though there was no reasonable potential for chromium (VI) to exceed water quality criteria based on one detected value, this Order includes a WQBEL for daily maximum chromium (VI) limitation of 82.5 μg/L.

1. Satisfaction of Anti-Backsliding Requirements

   The effluent limitation for total chromium has been removed from this Order. The MEC for total chromium was well below the effluent limitation in the existing Order and there are no water quality criteria to perform a reasonable potential analysis. The monitoring data submitted by the Discharger is considered new information by the Regional Board. The removal of effluent limitation for total chromium is consistent with the antidegradation provisions of 40 CFR §131.12 and State Water Board Resolution No. 68-16. Any impact on existing water quality will be insignificant, as this Order contains an effluent limitation for chromium (VI), which is a more toxic form of chromium.

2. Satisfaction of Antidegradation Policy

   The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant since the discharge is infrequent and temporally limited.

3. Stringency of Requirements for Individual Pollutants

   This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on oil and grease, TSS, settleable solids, COD, total organic carbon, and xylene. Restrictions on oil and grease, total organic carbon, and xylene are discussed in Section IV. B.2.

   WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved prior to May 30, 2000, by USEPA. Any water quality objectives and beneficial uses submitted prior to May 30, 2000, to USEPA, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

4. Mass-based Effluent Limitations

   Consistent with the previous Order, mass-based effluent limitations for the periodic discharge of storm water from the Facility are not included in this Order.

Table F-11. Summary of Final Effluent Limitations: Discharge Point No. 001

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	10	--	--
Oil and Grease	mg/L	15	--	--
Total Organic Carbon (TOC)	mg/L	110	--	--
Turbidity	NTU	75		
Total Suspended Solids	mg/L	75		
Settleable Solids	ml/L	0.2		
Chromium (VI)	µg/L	83		
Fecal Coliform[1]	MPN/ 100mL	[1]		
Xylene	µg/L	10	--	--
Copper	µg/L	5.8	--	--
Lead	µg/L	14	--	--
Zinc	µg/L	95	--	--
Nickel	µg/L	14	--	--
Mercury	µg/L	0.1	--	--
Benzo(a)Anthracene	µg/L	0.1	--	--
Benzo(a)Pyrene	µg/L	0.1	--	--
Benzo(b)Fluoranthene	µg/L	0.1	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	12	--	--
Total Petroleum Hydrocarbons (TPH)	µg/L	100		
pH	Units	--	6.5	8.5
Temperature	°F	--	--	86
Acute Toxicity	% survival	[2]		

1 Fecal coliform concentration shall not exceed a log mean of 200 MPN/100mL (based on a minimum of not less than four samples for consecutive discharge days), nor shall more than 10 percent of the total samples during the consecutive discharge days exceed 400 MPN/100 mL

2 Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

- Minimum of 70% for any one bioassay
- Median of 90% for any three or more consecutive bioassays

E. Interim Effluent Limitations

Interim effluent limitations for copper, lead and zinc were included in the previous Order. The Facility was required to comply by August 10, 2006, with the final WQBELs for copper, lead, and zinc. On July 24, 2006, the Discharger sent a Request for Extension of Interim Effluent Limitations to the Regional Water Board. The extension was requested until such time as TMDLs for copper, lead, and zinc are promulgated and put into effect for the Dominguez Channel. Although the Regional Water Board acknowledges the Discharger's efforts in supporting TMDL development, extension of the compliance deadline will only be granted till May 17, 2010 (final date of the end of SIP 10 year extension). The current schedule for completion of TMDLs for these pollutants is 2009. Although the Discharger has had 5 years to implement controls to ensure compliance with the final WQBELs for copper, lead and zinc analysis for this Order show that the discharge still has reasonable potential to exceed water quality criteria for these parameters. In order to ensure the control of the discharge of pollutants for which the Dominguez Channel is exceeding applicable water quality criteria, the Facility will be required to comply with the final WQBELs for copper, lead, and zinc effective May 17, 2010.

In addition, this Order contains limitations for mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate. Based on effluent monitoring data, the Discharger may be unable to comply with these limitations. As a result, this Order contains interim limitations for mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate and a compliance schedule that allows the Discharger up to May 17, 2010, to comply with the final effluent limitations. Within one year after the effective date of this Order, the Discharger must prepare and submit a compliance plan that describes the steps that will be taken to ensure compliance with applicable limitations, based on WQBELs.

40 CFR § 131.38(e) provides conditions under which interim effluent limitations and compliance schedules may be issued. The SIP allows inclusion of an interim limitation with a specific compliance schedule included in an NPDES permit for priority pollutants if the limitation for the priority pollutant is based on CTR criteria and the Discharger demonstrates that it is infeasible to achieve immediate compliance with the effluent limitations. Based on existing data, it appears that it is infeasible for the Discharger to immediately comply with the CTR-based effluent limitations for mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate interim effluent limitations and compliance schedule are included in the tentative Order.

Pursuant to the SIP (Section 2.2.1, Interim Requirements under a Compliance Schedule), when compliance schedules are established in an Order, interim limitations must be included based on current treatment facility performance or existing permit limitations, whichever is more stringent to maintain existing water quality. Because effluent limitations for mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate were not included in the previous Order, the MEC will serve as the interim effluent limitation. It should be noted that the Regional Water Board may take appropriate enforcement actions if interim limitations and requirements are not met.

The SIP requires that the Regional Water Board establish other interim requirements such as requiring the Discharger to develop a pollutant minimization plan and/or source control measures and participate in the activities necessary to achieve the final effluent limitations. These interim limitations shall be effective from Octobbber 6, 2007, until May 17, 2010, after which, the Discharger shall demonstrate compliance with the final effluent limitations.

Table F- 12. Interim Effluent Limitations

Parameter	Unit	Maximum Daily Effluent Limit
Copper	µg/L	74
Lead	µg/L	279
Mercury	µg/L	0.3
Nickel	µg/L	34
Zinc	µg/L	495
Benzo(a)Anthracene	µg/L	2.2
Benzo(a)Pyrene	µg/L	2
Benzo(b)Fluoranthene	µg/L	1
Bis(2-Ethylhexyl)Phthalate	µg/L	30

The Discharger is required to develop and submit a Compliance Plan, as discussed in Section VI.C.4 of the Limitations and Discharge Requirements.

F. Land Discharge Specifications

[Not Applicable]

G. Reclamation Specifications

[Not Applicable]

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Basin Plan.

B. Groundwater

[Not Applicable]

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify recording and reporting of monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

[Not Applicable]

B. Effluent Monitoring

Monitoring for those pollutants expected to be present in the discharge from Discharge Point No. 001, as monitored at Monitoring Location M-001, will be required as shown in MRP (Attachment E of this Order). To determine compliance with effluent limitations, the proposed MRP carries forward monitoring requirements for storm water runoff from the previous Order (No. 01-129) with some modifications. In the tentative monitoring and reporting program, monitoring requirements for total flow, temperature, pH, oil and grease, suspended solids, BOD_5 at 20°C, turbidity, fecal coliform, acute toxicity, total organic carbon (TOC), ammonia(as N), chromium(VI), total chromium, copper, lead, zinc and BTEX (benzene, toluene, ethylbenzene, and xylene) are carried over from the previous permit. Monitoring requirements have been added for the following pollutants since the discharge has a reasonable potential to cause or contribute to an in-stream excursion above applicable CTR criterion: mercury, nickel, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate. Monitoring for silver and thallium have been added since receiving water concentrations for these pollutants were higher than applicable water quality criteria. Also, monitoring of COD has been added.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. This Order includes limitations for acute toxicity, and therefore, monitoring requirements are included in the MRP to determine compliance with the effluent limitations established in Limitations and Discharge Requirements, Effluent Limitations, Section IV.A.1.a.

D. Receiving Water Monitoring

1. Surface Water

The previous monitoring and reporting requirements for receiving water have been revised based on the nature of the discharge and the infrequency of discharge to the receiving water. Receiving water monitoring requirements have been revised to be consistent with the requirements of other recently adopted Orders by this Regional Water Board for dischargers to inland surface waters.

This Order includes receiving water limitations and therefore, monitoring requirements are included in the MRP (Attachment E) to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A. Monitoring for temperature, pH, and dissolved oxygen in the downstream receiving water is included in the tentative permit. The Facility is required to perform general observations of the receiving water when discharges occur and report the observations in the monitoring report. Attention shall be given to the presence or absence of: floating or suspended matter, discoloration, aquatic life, visible film, sheen or coating, and fungi, slime, or objectionable growths.

The Discharger is required to monitor the upstream receiving water for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct upstream receiving water monitoring of the CTR priority pollutants at Monitoring Location R-001. The Discharger must analyze temperature, pH, and hardness of the upstream receiving water at the same time the samples are collected for priority pollutants analysis.

2. Groundwater

[Not Applicable]

E. Other Monitoring Requirements

1. Storm water monitoring requirements

In order to evaluate the effectiveness of the SWPPP, rainfall monitoring and visual storm water monitoring requirements have been carried over from the previous Order.

2. Sediment monitoring

Sediment monitoring established in Order No. 01-129 have been carried over as part of the Regional Water Board effort to collect data to monitor water quality and sediment in the Dominguez Channel. It is consistent with other dischargers to the Dominguez Channel. Annual sediment monitoring for sediment grain size, total organic carbon, total petroleum hydrocarbons, cadmium, chromium, copper, lead, nickel, zinc, PCBs, PAHs, DDT, odor and color have been carried over from Order No. 01-129. Since the Torrance Refinery ceased treated groundwater discharge in 2003, it is discharging only storm water (in addition to small volumes of steam condensate) during large storm events. Therefore, the Facility does not contribute to long-term toxic effects within the receiving water and chronic toxicity sediment monitoring requirements are removed from the MRP.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

2. Regional Water Board Standard Provisions

Regional Water Board Standard Provisions are based on the CWA, USEPA regulations, and the Water Code.

B. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR Part 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. Initial Investigation Toxicity Reduction Evaluation Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions.

3. Best Management Practices and Pollution Prevention

This provision is based on section 122.44(k) which includes the requirement to continue updating a SWPPP.

4. Compliance Schedules

a. Compliance Plan

1) The interim limitations stipulated in section IV.A.2 of this Order for copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate shall be in effect for a period not to extend beyond May 17, 2010. Thereafter, the Discharger shall comply with the final effluent limitations specified in section IV.A.1 of this Order.

2) The Discharger shall develop and submit, within 1 year of the effective date of this Order a compliance plan that will identify the measures that will be taken to reduce the concentrations of copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate in their discharge. This plan must evaluate options to achieve compliance with the final effluent limitations within the deadline specified above.

3) The Discharger shall submit annual reports to describe the progress of studies and or actions undertaken to reduce contaminant concentrations in the effluent, and to achieve compliance with the limitations in this Order by the deadline specified above. The Regional Water Board shall receive the first annual progress report at the same time the annual summary report is due, as required in section X.D of the MRP (Attachment E).

b. Pollutant Minimization Plan (PMP)

1) The Discharger shall develop a PMP to maintain effluent concentrations of copper, lead, mercury, nickel, zinc, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and bis(2-ethylhexyl)phthalate at or below the effluent limitations specified in Final Effluent Limitations section IV.A.1.a of this Order. The PMP shall include the following:

a) Annual review and quarterly monitoring of the potential sources of these constituents;

b) Submittal of a control strategy designed to proceed toward the goal of maintaining effluent concentrations at or below the effluent limitation;

c) Implementation of appropriate cost-effective control measures consistent with the control strategy;

d) An annual status report that shall be sent to the Regional Water Board at the same time the annual summary report is submitted in accordance with section X.D of the MRP (Attachment E), and include:

(i) All PMP monitoring results for the previous year;

(ii) A list of potential sources of each contaminant;

(iii) A summary of all actions undertaken pursuant to the control strategy; and

(iv) A description of actions to be taken in the following year.

5. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of section 122.41(e) and the previous Order.

6. Special Provisions for Municipal Facilities (POTWs Only)

[Not Applicable]

7. Other Special Provisions

a. Emergency Provision

Under normal operating conditions and typical wet weather events, the Discharger is required to maintain effluent flow of 10 mgd or less. This anticipated flow is based on maximum flow during the last 10 years of monitoring data and was recorded in February 1998. During an emergency storm event, flow restriction for this discharge could lead to potential flooding in the refinery which could result in additional pollutants contaminating the storm water. Therefore, during an emergency storm event, defined in this Order as the 24-hour, 50-year storm event, the Discharger may exceed a 10 mgd discharge to the receiving water. In the event of an emergency storm condition discharge, the Discharger shall continue to comply with effluent limitations for all pollutants.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Board, Los Angeles Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollution Discharge Elimination System (NPDES) permit for the ExxonMobil Oil Corporation. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices on July 19, 2007, by 5:00 p.m.

C. Hearing Date and Location

The Regional Board is scheduled to hold a public hearing on:

September 6, 2007 at 9:00 AM
Metropolitan Water District of Southern California
700 North Alameda Street, Los Angeles, California

Please check the Regional Board website (http://www.waterboards.ca.gov/losangeles/) for the most up to date public hearing location as it is subject to change.

D. Availability of Documents

The Report of Waste Discharge (ROWD), related documents, tentative requirements, comments received, and other information received on the discharge are available for inspection and copying between the hours of 8:00 a.m. and 4:30 p.m. at the following address:

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Arrangements for file review and/or obtaining copies of the documents may be made by calling the Los Angeles Regional Board at (213) 576-6600. The entire file will become a part of the administrative record of this proceeding, irrespective of whether individual documents are specifically referenced during the hearing. The entire file will not be present in the hearing room. Should any interested persons desire staff to bring to the hearing any particular documents that are not included in the agenda packet, they must submit a written or electronic request to staff during business hours, not later than [5] business days before the hearing. The request must identify the documents with enough specificity for staff to locate them.

E. Nature of Hearing

This proceeding will be a formal adjudicatory proceeding. For such proceedings, the Regional Board follows procedures established by the State Water Resources Control Board, which are set forth in regulations commencing with section 647 of title 23 of the California Code of

Regulations, in particular, Article 2, commencing with section 648. While this proceeding is formal, as an administrative proceeding, the Board does not generally require the prior identification or cross examination of witnesses, or other procedures not specified in this notice, that might typically be expected of parties in a courtroom.

F. Communications with Staff Before the Hearing

The lead staff member responsible for this item is:
Name: Mazhar Ali
Address: 320 West 4th Street, Suite 200, Los Angeles, CA 90013
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G. Parties to the Hearing

The following are the parties to this proceeding:

1. The Applicant/Permittee: ExxonMobil Oil Corp. (Torrance Refinery)

2. Regional Board Staff: Cassandra Owens, Chief
Industrial Permitting Unit

Mazhar Ali, Industrial Permitting Unit

Any other persons requesting party status must submit a written or electronic request to staff not later than [20] business days before the hearing. All parties will be notified if other persons are so designated.

H. Public Comments and Submittal of Evidence

Persons wishing to comment upon or object to the tentative waste discharge requirements, or submit evidence for the Board to consider, are invited to submit them in writing to the above address. To be evaluated and responded to by staff, included in the Board's agenda folder, and fully considered by the Board, written comments must be received no later than close of business on July 19, 2007. Comments or evidence received after that date will be submitted, ex agenda, to the Board for consideration, but only included in administrative record with express approval of the Chair during the hearing. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony.

I. Hearing Procedure

The meeting, in which the hearing will be a part of, will start at 9:00 a.m. Interested persons are invited to attend. Staff will present the matter under consideration, after which oral statements from parties or interested persons will be heard. For accuracy of the record, all important testimony should be in writing. The Board will include in the administrative record written transcriptions of oral testimony that is actually presented at the hearing. Oral testimony may be limited to 30 minutes maximum or less for each speaker, depending on the number of persons wishing to be heard. Parties or persons with similar concerns or opinions are encouraged to choose one representative to speak. At the conclusion of testimony, the Board will deliberate in open or close session, and render a decision.

Parties or persons with special procedural requests should contact staff. Any procedure not specified in this hearing notice will be waived pursuant to section 648(d) of title 23 of the California Code of Regulations. Objections to any procedure to be used during this hearing must be submitted in writing not later than close of 15 business days prior to the date of the hearing. Procedural objections will not be entertained at the hearing.

If there should not be a quorum on the scheduled date of this meeting, all cases will be automatically continued to the next scheduled meeting on September 6, 2007. A continuance will not extend any time set forth herein.

J. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. Objectives

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

2. Planning and Organization

a. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in the Monitoring and Reporting Program (Attachment E). The SWPPP shall clearly identify the related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

b. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this Order. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this Order. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

3. Site Map

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION
Form Pollution Prevention Team Review other plans

ASSESSMENT PHASE
Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-storm water discharges Assess pollutant Risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE
Non-structural BMPs Structural BMPs Select activity and site-specific BMPs

IMPLEMENTATION PHASE
Train employees Implement BMPs Conduct recordkeeping and reporting

EVALUATION / MONITORING
Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil-water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

4. List of Significant Materials

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

5. Description of Potential Pollutant Sources

a. The SWPPP shall include a narrative description of the facility's industrial activities associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water. The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Order.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources not authorized by this Order. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All un-authorized non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the un-authorized non-storm water discharges and associated drainage area.

The SWPPP must include BMPs to prevent or reduce contact of un-authorized non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section 7. below.

6. Assessment of Potential Pollutant Sources

a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described above to determine:

i. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

ii. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

b. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 7 below.

7. Storm Water Best Management Practices

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections 5 and 6, above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

TABLE B
EXAMPLE

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery. Spills caused by topping off fuel tanks. Hosing or washing down fuel oil fuel area. Leaking storage tanks. Rainfall running off fuel oil, and rainfall running onto and off fueling area.	fuel oil	Use spill and overflow protection. Minimize run-on of storm water into the fueling area. Cover fueling area. Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program. Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section 7.b, below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil-water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up

procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs

Where non-structural BMPs as identified in Section 7.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

i. Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil-water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

8. SWPPP General Requirements

a. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

b. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum

requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

d. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Order.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in this Order due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

f. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS (ML)

The Minimum Levels (MLs) in ppb (µg/L) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the State Water Board and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	**10**	**5**		
1,2 Dichlorobenzene (semivolatile)	**2**	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	**1**	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	**0.5**	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	**2**	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	**10**	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	**10**	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	**5**	**1**		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	**0.05**	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

** Phenol by colorimetric technique has a factor of 1.

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		**20**	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	**0.05**
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	**0.5**
PCB 1242	**0.5**
PCB 1248	**0.5**
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:
GC - Gas Chromatography

GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

ATTACHMENT I – PRIORITY POLLUTANTS

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
			1
1	Antimony	7440360	1
2	Arsenic	7440382	1
3	Beryllium	7440417	1
4	Cadmium	7440439	1
5a	Chromium (III)	16065831	1
5a	Chromium (VI)	18540299	1
6	Copper	7440508	1
7	Lead	7439921	1
8	Mercury	7439976	1
9	Nickel	7440020	1
10	Selenium	7782492	1
11	Silver	7440224	1
12	Thallium	7440280	1
13	Zinc	7440666	1
14	Cyanide	57125	1
15	Asbestos	1332214	1
16	2,3,7,8-TCDD	1746016	1
17	Acrolein	107028	1
18	Acrylonitrile	107131	1
19	Benzene	71432	1
20	Bromoform	75252	1
21	Carbon Tetrachloride	56235	1
22	Chlorobenzene	108907	1
23	Chlorodibromomethane	124481	1
24	Chloroethane	75003	1
25	2-Chloroethylvinyl Ether	110758	1
26	Chloroform	67663	1
27	Dichlorobromomethane	75274	1
28	1,1-Dichloroethane	75343	1
29	1,2-Dichloroethane	107062	1
30	1,1-Dichloroethylene	75354	1
31	1,2-Dichloropropane	78875	1
32	1,3-Dichloropropylene	542756	1
33	Ethylbenzene	100414	1
34	Methyl Bromide	74839	1
35	Methyl Chloride	74873	1
36	Methylene Chloride	75092	1
37	1,1,2,2-Tetrachloroethane	79345	1
38	Tetrachloroethylene	127184	1
39	Toluene	108883	1
40	1,2-Trans-Dichloroethylene	156605	1
41	1,1,1-Trichloroethane	71556	1
42	1,12-Trichloroethane	79005	1
43	Trichloroethylene	79016	1
44	Vinyl Chloride	75014	1
45	2-Chlorophenol	95578	1
46	2,4-Dichlorophenol	120832	1
47	2,4-Dimethylphenol	105679	1
48	2-Methyl-4,6-Dinitrophenol	534521	1
49	2,4-Dinitrophenol	51285	1
50	2-Nitrophenol	88755	1

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
51	4-Nitrophenol	100027	1
52	3-Methyl-4-Chlorophenol	59507	1
53	Pentachlorophenol	87865	1
54	Phenol	108952	1
55	2,4,6-Trichlorophenol	88062	1
56	Acenaphthene	83329	1
57	Acenaphthylene	208968	1
58	Anthracene	120127	1
59	Benzidine	92875	1
60	Benzo(a)Anthracene	56553	1
61	Benzo(a)Pyrene	50328	1
62	Benzo(b)Fluoranthene	205992	1
63	Benzo(ghi)Perylene	191242	1
64	Benzo(k)Fluoranthene	207089	1
65	Bis(2-Chloroethoxy)Methane	111911	1
66	Bis(2-Chloroethyl)Ether	111444	1
67	Bis(2-Chloroisopropyl)Ether	108601	1
68	Bis(2-Ethylhexyl)Phthalate	117817	1
69	4-Bromophenyl Phenyl Ether	101553	1
70	Butylbenzyl Phthalate	85687	1
71	2-Chloronaphthalene	91587	1
72	4-Chlorophenyl Phenyl Ether	7005723	1
73	Chrysene	218019	1
74	Dibenzo(a,h)Anthracene	53703	1
75	1,2-Dichlorobenzene	95501	1
76	1,3-Dichlorobenzene	541731	1
77	1,4-Dichlorobenzene	106467	1
78	3,3'-Dichlorobenzidine	91941	1
79	Diethyl Phthalate	84662	1
80	Dimethyl Phthalate	131113	1
81	Di-n-Butyl Phthalate	84742	1
82	2,4-Dinitrotoluene	121142	1
83	2,6-Dinitrotoluene	606202	1
84	Di-n-Octyl Phthalate	117840	1
85	1,2-Diphenylhydrazine	122667	1
86	Fluoranthene	206440	1
87	Fluorene	86737	1
88	Hexachlorobenzene	118741	1
89	Hexachlorobutadiene	87863	1
90	Hexachlorocyclopentadiene	77474	1
91	Hexachloroethane	67721	1
92	Indeno(1,2,3-cd)Pyrene	193395	1
93	Isophorone	78591	1
94	Naphthalene	91203	1
95	Nitrobenzene	98953	1
96	N-Nitrosodimethylamine	62759	1
97	N-Nitrosodi-n-Propylamine	621647	1
98	N-Nitrosodiphenylamine	86306	1
99	Phenanthrene	85018	1
100	Pyrene	129000	1
101	1,2,4-Trichlorobenzene	120821	1
102	Aldrin	309002	1
103	alpha-BHC	319846	1
104	beta-BHC	319857	1

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
105	gamma-BHC	58899	1
106	delta-BHC	319868	1
107	Chlordane	57749	1
108	4,4'-DDT	50293	1
109	4,4'-DDE	72559	1
110	4,4'-DDD	72548	1
111	Dieldrin	60571	1
112	alpha-Endosulfan	959988	1
113	beta-Endosulfan	33213659	1
114	Endosulfan Sulfate	1031078	1
115	Endrin	72208	1
116	Endrin Aldehyde	7421934	1
117	Heptachlor	76448	1
118	Heptachlor Epoxide	1024573	1
119	PCB-1016	12674112	1
120	PCB-1221	11104282	1
121	PCB-1232	11141165	1
122	PCB-1242	53469219	1
123	PCB-1248	12672296	1
124	PCB-1254	11097691	1
125	PCB-1260	11096825	1
126	Toxaphene	8001352	1

1. Pollutants shall be analyzed using methods described in 40 CFR Part 136

Attachment J
Draft Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L) Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Saltwater C acute = CMC tot	Saltwater C chronic = CCC tot	Human Health for consumption of: Water & organisms	Organisms only	Lowest C	REASONABLE POTENTIAL ANALYSIS (RPA) MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	HUMAN HEALTH CALCULATIONS Organisms only AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh
1	Antimony	ug/L								4300.00	4300.00			N					No detected value of B, Step 7		Ud	No effluent data & no B			
2	Arsenic	ug/L					69.00	36.00			36.00			N					No detected value of B, Step 7		Ud	No effluent data & no B			
3	Beryllium	ug/L		No Criteria						Narrative	No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
4	Cadmium	ug/L					42.25	9.36		Narrative	9.36			N					No detected value of B, Step 7		Ud	No effluent data & no B			
5a	Chromium (III)			No Criteria						Narrative	No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
5b	Chromium (VI)	ug/L		11			1107.75	50.35		Narrative	50.35	No	No	N					No detected value of B, Step 7		No	Ud;MEC<C & no B			
6	Copper	ug/L	0.6	39.8			5.78	3.73			3.73	Yes	Yes	Y	N		10.3		Limit required, B>C & pollutant		Yes	MEC>=C		2.01	
7	Lead	ug/L	0.6	171			220.82	8.52		Narrative	8.52	Yes	Yes	Y	Y	2.36		N	No detected value of B, Step 7		Yes	MEC>=C		2.01	
8	Mercury	ug/L	0.6	0.262			Reserved	Reserved		0.051	0.051	Yes	Yes	Y	Y	0.0672		Y	No detected value of B, Step 7		Yes	MEC>=C	0.051	2.01	0.10232
9	Nickel	ug/L	0.6	33.5			74.75	8.28		4600.00	8.28	Yes	Yes	Y	N		5.18		B<=C, Step 7		Yes	MEC>=C	4600	2.01	9228.47012
10	Selenium	ug/L					290.58	71.14		Narrative	71.14			N					No detected value of B, Step 7		Ud	No effluent data & no B			
11	Silver	ug/L	0.6	0.4			2.24				2.24	No	No	Y	N		3.44		B>C & eff ND, Step 7		No	ud; B>C & effluent ND		2.01	
12	Thallium	ug/L	0.6	2.33						6.30	6.30	No	No	Y	N		6.31		B>C & eff ND, Step 7		No	ud; B>C & effluent ND	6.3	2.01	12.63899
13	Zinc	ug/L	0.6	619			95.14	85.62			85.62	Yes	Yes	Y	N		27.3		B<=C, Step 7		Yes	MEC>=C		2.01	
14	Cyanide	ug/L					1.00	1.00		220000.00	1.00			Y	Y	47		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
15	Asbestos	Fibers/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
16	2,3,7,8 TCDD	ug/L								##########	0.000000014			N					No detected value of B, Step 7		No	UD;Effluent ND,MDL>C & No			
17	Acrolein	ug/L								780	780			N					No detected value of B, Step 7		Ud	No effluent data & no B			
18	Acrylonitrile	ug/L								0.66	0.660			Y	Y	0.49		N	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
19	Benzene	ug/L		21						71	71.00	No	No	Y	Y	0.1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
20	Bromoform	ug/L								360	360.0			N					No detected value of B, Step 7		Ud	No effluent data & no B			
21	Carbon Tetrachloride	ug/L		0.1						4.4	4.40	No	No	Y	Y	0.1		N	No detected value of B, Step 7		No	MEC<C & B is ND			
22	Chlorobenzene	ug/L								21000	21000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
23	Chlorodibromomethane	ug/L								34	34.00			N					No detected value of B, Step 7		Ud	No effluent data & no B			
24	Chloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
25	2-Chloroethylvinyl ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
26	Chloroform	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
27	Dichlorobromomethane	ug/L								46	46.00			N					No detected value of B, Step 7		Ud	No effluent data & no B			
28	1,1-Dichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
29	1,2-Dichloroethane	ug/L		0.081						99	99.00	No	No	Y	Y	0.081		N	No detected value of B, Step 7		No	MEC<C & B is ND			
30	1,1-Dichloroethylene	ug/L		0.16						3.2	3.200	No	No	N					No detected value of B, Step 7		No	Ud;MEC<C & no B			
31	1,2-Dichloropropane	ug/L								39	39.00			N					No detected value of B, Step 7		Ud	No effluent data & no B			
32	1,3-Dichloropropylene	ug/L								1700	1700			N					No detected value of B, Step 7		Ud	No effluent data & no B			
33	Ethylbenzene	ug/L		4.1						29000	29000	No	No	Y	Y	0.077		N	No detected value of B, Step 7		No	MEC<C & B is ND			
34	Methyl Bromide	ug/L								4000	4000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
35	Methyl Chloride	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
36	Methylene Chloride	ug/L								1600	1600.0			N					No detected value of B, Step 7		Ud	No effluent data & no B			
37	1,1,2,2-Tetrachloroethane	ug/L								11	11.00			N					No detected value of B, Step 7		Ud	No effluent data & no B			
38	Tetrachloroethylene	ug/L								8.85	8.9			N					No detected value of B, Step 7		Ud	No effluent data & no B			
39	Toluene	ug/L		33						200000	200000	No	No	Y	Y	0.091		N	No detected value of B, Step 7		No	MEC<C & B is ND			
40	1,2-Trans-Dichloroethylene	ug/L								140000	140000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
41	1,1,1-Trichloroethane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
42	1,1,2-Trichloroethane	ug/L								42	42.0			N					No detected value of B, Step 7		Ud	No effluent data & no B			
43	Trichloroethylene	ug/L								81	81.0			N					No detected value of B, Step 7		Ud	No effluent data & no B			
44	Vinyl Chloride	ug/L								525	525			N					No detected value of B, Step 7		Ud	No effluent data & no B			
45	2-Chlorophenol	ug/L								400	400			N					No detected value of B, Step 7		Ud	No effluent data & no B			
46	2,4-Dichlorophenol	ug/L								790	790			N					No detected value of B, Step 7		Ud	No effluent data & no B			
47	2,4-Dimethylphenol	ug/L								2300	2300			N					No detected value of B, Step 7		Ud	No effluent data & no B			
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L								765	765.0			N					No detected value of B, Step 7		Ud	No effluent data & no B			
49	2,4-Dinitrophenol	ug/L								14000	14000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
50	2-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
51	4-Nitrophenol	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
53	Pentachlorophenol	ug/L		2.3			13.00	7.90		8.2	7.90	No	No	Y	Y	2.3		N	No detected value of B, Step 7		No	MEC<C & B is ND			
54	Phenol	ug/L								4600000	4600000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
55	2,4,6-Trichlorophenol	ug/L		3.6						6.5	6.5	No	No	Y	Y	3.6		N	No detected value of B, Step 7		No	MEC<C & B is ND			
56	Acenaphthene	ug/L		1.6						2700	2700	No	No	Y	Y	0.19		N	No detected value of B, Step 7		No	MEC<C & B is ND			
57	Acenaphthylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.25		N	No Criteria	No Criteria	Uc	No Criteria			
58	Anthracene	ug/L		4.2						110000	110000	No	No	Y	Y	0.011		N	No detected value of B, Step 7		No	MEC<C & B is ND			
59	Benzidine	ug/L								0.00054	0.00054			Y	Y	19		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
60	Benzo(a)Anthracene	ug/L	0.6	2.2						0.049	0.0490	Yes	Yes	Y	Y	0.02		N	No detected value of B, Step 7		Yes	MEC>=C	0.049	2.01	0.09830
61	Benzo(a)Pyrene	ug/L	0.6	1.9						0.049	0.0490	Yes	Yes	Y	Y	0.012		N	No detected value of B, Step 7		Yes	MEC>=C	0.049	2.01	0.09830
62	Benzo(b)Fluoranthene	ug/L	0.6	0.83						0.049	0.0490	Yes	Yes	Y	Y	0.024		N	No detected value of B, Step 7		Yes	MEC>=C	0.049	2.01	0.09830
63	Benzo(ghi)Perylene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.032		N	No Criteria	No Criteria	Uc	No Criteria			
64	Benzo(k)Fluoranthene	ug/L	0.6	0.02						0.049	0.0490	No	No	Y	Y	0.018		N	No detected value of B, Step 7		No	MEC<C & B is ND	0.049	2.01	0.09830
65	Bis(2-Chloroethoxy)Methane	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
66	Bis(2-Chloroethyl)Ether	ug/L								1.4	1.400			Y	Y	2.7		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
67	Bis(2-Chloroisopropyl)Ether	ug/L								170000	170000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
68	Bis(2-Ethylhexyl)Phthalate	ug/L	0.6	30						5.9	5.9	Yes	Yes	Y	Y	1.8		N	No detected value of B, Step 7		Yes	MEC>=C	5.9	2.01	11.83652
69	4-Bromophenyl Phenyl Ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
70	Butylbenzyl Phthalate	ug/L								5200	5200			N					No detected value of B, Step 7		Ud	No effluent data & no B			
71	2-Chloronaphthalene	ug/L								4300	4300			N					No detected value of B, Step 7		Ud	No effluent data & no B			
72	4-Chlorophenyl Phenyl Ether	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
73	Chrysene	ug/L	0.6							0.049	0.0490			Y	Y	0.018		N	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and	0.049	2.01	0.09830
74	Dibenzo(a,h)Anthracene	ug/L	0.6	0.04						0.049	0.0490	No	No	Y	Y	0.02		N	No detected value of B, Step 7		No	MEC<C & B is ND	0.049	2.01	0.09830
75	1,2-Dichlorobenzene	ug/L								17000	17000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
76	1,3-Dichlorobenzene	ug/L								2600	2600			N					No detected value of B, Step 7		Ud	No effluent data & no B			
77	1,4-Dichlorobenzene	ug/L								2600	2600			N					No detected value of B, Step 7		Ud	No effluent data & no B			
78	3,3 Dichlorobenzidine	ug/L								0.077	0.08			Y	Y	1.7		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
79	Diethyl Phthalate	ug/L								120000	120000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
80	Dimethyl Phthalate	ug/L								2900000	2900000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
81	Di-n-Butyl Phthalate	ug/L								12000	12000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
82	2,4-Dinitrotoluene	ug/L		1.9						9.10	9.10	No	No	Y	Y	1.9		N	No detected value of B, Step 7		No	MEC<C & B is ND			

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L) Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Saltwater C acute = CMC tot	Saltwater C chronic = CCC tot	Human Health for consumption of: Water & organisms	Human Health for consumption of: Organisms only	Lowest C	REASONABLE POTENTIAL ANALYSIS (RPA) MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	HUMAN HEALTH CALCULATIONS Organisms only AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh
83	2,6-Dinitrotoluene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
84	Di-n-Octyl Phthalate	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
85	1,2-Diphenylhydrazine	ug/L								0.54	0.540			N					No detected value of B, Step 7		Ud	No effluent data & no B			
86	Fluoranthene	ug/L		5.5						370	370	No	No	Y	Y	0.028		N	No detected value of B, Step 7		No	MEC<C & B is ND			
87	Fluorene	ug/L		6.7						14000	14000	No	No	Y	Y	0.038		N	No detected value of B, Step 7		No	MEC<C & B is ND			
88	Hexachlorobenzene	ug/L								0.00077	0.00077			Y	Y	2.7		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
89	Hexachlorobutadiene	ug/L								50	50.00			N					No detected value of B, Step 7		Ud	No effluent data & no B			
90	Hexachlorocyclopentadiene	ug/L								17000	17000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
91	Hexachloroethane	ug/L		2.4						8.9	8.9	No	No	Y	Y	2.4		N	No detected value of B, Step 7		No	MEC<C & B is ND			
92	Indeno(1,2,3-cd)Pyrene	ug/L	0.6							0.049	0.0490			Y	Y	0.012		N	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and	0.049	2.01	0.09830
93	Isophorone	ug/L								600	600.0			N					No detected value of B, Step 7		Ud	No effluent data & no B			
94	Naphthalene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.14		N	No Criteria	No Criteria	Uc	No Criteria			
95	Nitrobenzene	ug/L								1900	1900			N					No detected value of B, Step 7		Ud	No effluent data & no B			
96	N-Nitrosodimethylamine	ug/L								8.10	8.10000			N					No detected value of B, Step 7		Ud	No effluent data & no B			
97	N-Nitrosodi-n-Propylamine	ug/L								1.40	1.400			Y	Y	2.4		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
98	N-Nitrosodiphenylamine	ug/L								16	16.0			N					No detected value of B, Step 7		Ud	No effluent data & no B			
99	Phenanthrene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.015		N	No Criteria	No Criteria	Uc	No Criteria			
100	Pyrene	ug/L		12						11000	11000	No	No	Y	Y	0.027		N	No detected value of B, Step 7		No	MEC<C & B is ND			
101	1,2,4-Trichlorobenzene	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
102	Aldrin	ug/L					1.30			0.00014	0.00014			Y	Y				No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
103	alpha-BHC	ug/L								0.013	0.0130			Y	Y				No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
104	beta-BHC	ug/L		0.0082						0.046	0.046	No	No	Y	Y	0.0082		N	No detected value of B, Step 7		No	MEC<C & B is ND			
105	gamma-BHC	ug/L		0.02			0.16			0.063	0.063	No	No	Y	Y	0.02		N	No detected value of B, Step 7		No	MEC<C & B is ND			
106	delta-BHC	ug/L		No Criteria							No Criteria	No Criteria	No Criteria	N					No Criteria	No Criteria	Uc	No Criteria			
107	Chlordane	ug/L					0.09	0.004		0.00059	0.00059			Y	Y	0.065		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
108	4,4'-DDT	ug/L					0.13	0.001		0.00059	0.00059			Y	Y	0.015		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
109	4,4'-DDE (linked to DDT)	ug/L								0.00059	0.00059			Y	Y	0.012		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
110	4,4'-DDD	ug/L								0.00084	0.00084			Y	Y	0.012		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
111	Dieldrin	ug/L					0.71	0.0019		0.00014	0.00014			Y	Y	0.012		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
112	alpha-Endosulfan	ug/L		0.0052			0.034	0.0087		240	0.0087	No	No	Y	Y	0.0052		N	No detected value of B, Step 7		No	MEC<C & B is ND			
113	beta-Endolsulfan	ug/L					0.034	0.0087		240	0.0087			Y	Y	0.011		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
114	Endosulfan Sulfate	ug/L								240	240			N					No detected value of B, Step 7		Ud	No effluent data & no B			
115	Endrin	ug/L					0.037	0.0023		0.81	0.0023			Y	Y	0.012		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
116	Endrin Aldehyde	ug/L								0.81	0.81			N					No detected value of B, Step 7		Ud	No effluent data & no B			
117	Heptachlor	ug/L					0.053	0.0036		0.00021	0.00021			Y	Y	0.0074		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
118	Heptachlor Epoxide	ug/L					0.053	0.0036		0.00011	0.00011			Y	Y	0.023		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
119-125	PCBs sum (3)	ug/L						0.03		0.00017	0.00017			Y	Y	0.05		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			
126	Toxaphene	ug/L					0.21	0.0002		0.00075	0.0002			Y	Y	0.31		Y	No detected value of B, Step 7		No	UD; effluent ND, MDL>C, and			

Notes:
Jd = Undetermined due to lack of data
Jc = Undetermined due to lack of CTR Water Quality Criteria
C = Water Quality Criteria
B = Background receiving water data

CTR#	Parameters	AQUATIC LIFE CALCULATIONS									LIMITS		Recommendation	Comment
		Saltwater / Freshwater / Basin Plan												
		ECA acute multiplier (n.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	Lowest AMEL	Lowest MDEL		
1	Antimony												No Limit	
2	Arsenic												No Limit	
3	Beryllium												No Limit	
4	Cadmium												No Limit	Existing Limit More Stringent
5a	Chromium (III)												No Limit	
5b	Chromium (VI)												No Limit	
6	Copper	0.32	1.86	0.53	1.97	1.86	1.55	2.88	3.11	5.783133	2.88	5.78		
7	Lead	0.32	70.90	0.53	4.49	4.49	1.55	6.97	3.11	13.99119	6.97	13.99		
8	Mercury						1.55		3.11		0.05100	0.10232		
9	Nickel	0.32	24.00	0.53	4.37	4.37	1.55	6.78	3.11	13.60595	6.78199	13.60595		
10	Selenium												No Limit	
11	Silver	0.32	0.72	0.53		0.72	1.55	1.11	3.11	2.235294	1.11420	2.23529		
12	Thallium						1.55		3.11		6.30000	12.63899		
13	Zinc	0.32	30.55	0.53	45.16	30.55	1.55	47.42	3.11	95.13742	47.42	95.14		
14	Cyanide												No Limit	
15	Asbestos												No Limit	
16	2,3,7,8 TCDD												No Limit	
17	Acrolein												No Limit	
18	Acrylonitrile												No Limit	
19	Benzene												No Limit	
20	Bromoform												No Limit	
21	Carbon Tetrachloride												No Limit	
22	Chlorobenzene												No Limit	
23	Chlorodibromomethane												No Limit	
24	Chloroethane												No Limit	
25	2-Chloroethylvinyl ether												No Limit	
26	Chloroform												No Limit	
27	Dichlorobromomethane												No Limit	
28	1,1-Dichloroethane												No Limit	
29	1,2-Dichloroethane												No Limit	
30	1,1-Dichloroethylene												No Limit	
31	1,2-Dichloropropane												No Limit	
32	1,3-Dichloropropylene												No Limit	
33	Ethylbenzene												No Limit	
34	Methyl Bromide												No Limit	
35	Methyl Chloride												No Limit	
36	Methylene Chloride												No Limit	
37	1,1,2,2-Tetrachloroethane												No Limit	
38	Tetrachloroethylene												No Limit	
39	Toluene												No Limit	
40	1,2-Trans-Dichloroethylene												No Limit	
41	1,1,1-Trichloroethane												No Limit	
42	1,1,2-Trichloroethane												No Limit	
43	Trichloroethylene												No Limit	
44	Vinyl Chloride												No Limit	
45	2-Chlorophenol												No Limit	
46	2,4-Dichlorophenol												No Limit	
47	2,4-Dimethylphenol												No Limit	
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)												No Limit	
49	2,4-Dinitrophenol												No Limit	
50	2-Nitrophenol												No Limit	
51	4-Nitrophenol												No Limit	
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)												No Limit	
53	Pentachlorophenol												No Limit	
54	Phenol												No Limit	
55	2,4,6-Trichlorophenol												No Limit	
56	Acenaphthene												No Limit	
57	Acenaphthylene												No Limit	
58	Anthracene												No Limit	
59	Benzidine												No Limit	
60	Benzo(a)Anthracene						1.55		3.11		0.04900	0.09830		
61	Benzo(a)Pyrene						1.55		3.11		0.04900	0.09830		
62	Benzo(b)Fluoranthene						1.55		3.11		0.04900	0.09830		
63	Benzo(ghi)Perylene												No Limit	
64	Benzo(k)Fluoranthene						1.55		3.11		0.04900	0.09830		
65	Bis(2-Chloroethoxy)Methane												No Limit	
66	Bis(2-Chloroethyl)Ether												No Limit	
67	Bis(2-Chloroisopropyl)Ether												No Limit	
68	Bis(2-Ethylhexyl)Phthalate						1.55		3.11		5.90000	11.83652		
69	4-Bromophenyl Phenyl Ether												No Limit	
70	Butylbenzyl Phthalate												No Limit	
71	2-Chloronaphthalene												No Limit	
72	4-Chlorophenyl Phenyl Ether												No Limit	
73	Chrysene						1.55		3.11		0.04900	0.09830		
74	Dibenzo(a,h)Anthracene						1.55		3.11		0.04900	0.09830		
75	1,2-Dichlorobenzene												No Limit	
76	1,3-Dichlorobenzene												No Limit	
77	1,4-Dichlorobenzene												No Limit	
78	3,3 Dichlorobenzidine												No Limit	
79	Diethyl Phthalate												No Limit	
80	Dimethyl Phthalate												No Limit	
81	Di-n-Butyl Phthalate												No Limit	
82	2,4-Dinitrotoluene												No Limit	

CTR#	Parameters	AQUATIC LIFE CALCULATIONS									LIMITS		Recommendation	Comment
		Saltwater / Freshwater / Basin Plan												
		ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	Lowest AMEL	Lowest MDEL		
83	2,6-Dinitrotoluene												No Limit	
84	Di-n-Octyl Phthalate												No Limit	
85	1,2-Diphenylhydrazine												No Limit	
86	Fluoranthene												No Limit	
87	Fluorene												No Limit	
88	Hexachlorobenzene												No Limit	
89	Hexachlorobutadiene												No Limit	
90	Hexachlorocyclopentadiene												No Limit	
91	Hexachloroethane												No Limit	
92	Indeno(1,2,3-cd)Pyrene						1.55		3.11		0.04900	0.09830		
93	Isophorone												No Limit	
94	Naphthalene												No Limit	
95	Nitrobenzene												No Limit	
96	N-Nitrosodimethylamine												No Limit	
97	N-Nitrosodi-n-Propylamine												No Limit	
98	N-Nitrosodiphenylamine												No Limit	
99	Phenanthrene												No Limit	
100	Pyrene												No Limit	
101	1,2,4-Trichlorobenzene												No Limit	
102	Aldrin												No Limit	
103	alpha-BHC												No Limit	
104	beta-BHC												No Limit	
105	gamma-BHC												No Limit	
106	delta-BHC												No Limit	
107	Chlordane												No Limit	
108	4,4'-DDT												No Limit	
109	4,4'-DDE (linked to DDT)												No Limit	
110	4,4'-DDD												No Limit	
111	Dieldrin												No Limit	
112	alpha-Endosulfan												No Limit	
113	beta-Endosulfan												No Limit	
114	Endosulfan Sulfate												No Limit	
115	Endrin												No Limit	
116	Endrin Aldehyde												No Limit	
117	Heptachlor												No Limit	
118	Heptachlor Epoxide												No Limit	
119-125	PCBs sum (2)												No Limit	
126	Toxaphene												No Limit	

es:
= Undetermined due to lack of data
= Undetermined due to lack of CTR \
Water Quality Criteria
Background receiving water data

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
Interim Final 2/5/99
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)
Migration of Contaminated Groundwater Under Control

Facility Name:	University of Virginia
Facility Address:	P.O. Box 3425, Charlottesville, VA 22903
Facility EPA ID #:	VAD 00 082 0712

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

X If yes - check here and continue with #2 below.

____ If no - re-evaluate existing data, or

____ if data are not available skip to #6 and enter"IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Is **groundwater** known or reasonably suspected to be **"contaminated"** [1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

____ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_X_ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

The University of Virginia (UVA) founded in 1819 by Thomas Jefferson, is a state-supported institution that supports research and scholarship in many fields. Based on an initial facility wide assessment two areas were identified for further study. These areas are identified as SWMU 16 and the Hillside disposal Area (HDA). Field work, including the collection of groundwater samples, for an investigation of environmental media was conducted in September 2000.

Three rounds of ground water samples have been collected at SWMU 16 and the HDA. The samples were collected on September 28, 2000, January 9, 2001 and June 8, 2001. Concentrations of Bis(2-Ethylhexyl)phthalate exceeding the Region 3 RBC (4.8 ppb) has been detected in samples from all three rounds, however there are no consistent trends in the detected concentrations of Bis(2-Ethylhexyl)phthalate to indicate a ground water plume and/or a discernible source. In addition, the highest concentration of Bis(2-Ethylhexyl)phthalate (150 ppb) was detected during the third round of sampling in a sample collected at the upgradient monitoring well. Upgradient monitoring wells are used to collect samples that are representative of naturally occurring conditions, i.e. not impacted by the disposal areas. There was no correlation from samples collected at this location in the first two rounds of sampling which yielded Bis(2-Ethylhexyl)phthalate concentrations of 29 ppb and non-detect respectively.

A literature search indicates that Bis(2-Ethylhexyl)phthalate is a manufactured chemical that makes plastic more flexible and is a common sampling and laboratory artifact. A further review of the report documenting the sample collection activities indicates several pieces of sampling equipment used were plastic products and have the potential for contaminating the groundwater samples with Bis(2-Ethylhexyl)phthalate (e.g. plastic tubing from the submersible pump, plastic tubs for decon, etc.)

A thorough evaluation of these data leads EPA to conclude that the anomalous concentrations of Bis(2-Ethylhexyl)phthalate are attributable to sampling equipment artifacts and does not represent a contaminant in the groundwater. This conclusion is also supported by a review of the soils data which indicates that there were no concentrations of Bis(2-Ethylhexyl)phthalate in soils that exceed the Region 3 RBC Soil Screening Levels. There were no other constituents analyzed in the groundwater samples that exceeded the appropriate screening levels.

For more information on the investigation of SWMU 16 and the HDA at UVA, please see the report entitled "Source Characterization Investigation of Two Former Waste Disposal Sites at Observatory Hill, University of Virginia" dated October 2001.

Footnotes:

[1]"Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

_____ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) - skip to #8 and enter "NO" status code, after providing an explanation.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): _____

[2] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

4. Does “contaminated” groundwater **discharge** into **surface water** bodies?

_____ If yes - continue after identifying potentially affected surface water bodies.

_____ If no - skip to #7 (and enter a “YE” status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater “contamination” does not enter surface water bodies.

_____ If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):_____

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

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_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):_____

[3] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):_____

[4] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

_____ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

_____ If no - enter "NO" status code in #8.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):_____

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

X YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the **University of Virginia, (SWMU 16 and Hillside Disposal Area),** EPA ID # **VAD 00 082 0712**, located **off Fontaine Ave. (Business 29), Charlottesville, VA.** Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility. (Note: In the case of University of Virginia SWMU 16 and HDA no further monitoring is necessary since there is no release to groundwater.)

____ NO - Unacceptable migration of contaminated groundwater is observed or expected.

____ IN - More information is needed to make a determination.

Completed by (signature) Date 06-03-02
(print) Russell H. Fish
(title) Remedial Project Manager

Supervisor (signature) Date 06-06-02
(print) Robert E. Greaves
(title) Chief, General Operations Branch
(EPA Region or State) EPA, Region 3

Locations where References may be found:

US EPA Region III
11th Floor
1650 Arch Street
Philadelphia, PA 19103

University of Virginia
Science and Engineering Library, Clark Hall
Charlottesville, VA 22904-4322

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October 9, 2007

Margaret Rosegay
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VIA EMAIL

Jeannette L. Bashaw, Legal Secretary
State Water Resources Control Board
Office of Chief Counsel
1001 I Street, 22nd Floor
Sacramento, CA 95814

Re: ExxonMobil Oil Corporation
Verified Petition for Review and Request for Hearing of Los Angeles Regional Water Quality Control Board Order No. R4-2007-0049, adopted September 6, 2007

Dear Ms. Bashaw:

On behalf of the ExxonMobil Oil Corporation, I enclose for filing with the State Water Resources Control Board a Verified Petition for Review and Request for Hearing, with accompanying exhibits and declarations, in the above-referenced matter. A hard-copy of the Petition will not be submitted unless requested by the State Board.

A copy of the Petition has been sent by first-class mail to Ms. Tracy Egoscue, Executive Officer, of the Los Angeles Regional Water Quality Control Board.

Thank you.

Very truly yours,

Margaret Rosegay

Enclosures

cc: Ms. Tracy Egoscue (w/encs.)

Thomas Daly, ExxonMobil (via e-mail)
Ron Vaughan, Exxon Mobil (via e-mail)

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