

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of )  
Mobil Oil Corporation for Review )  
of Order No. 75-25 (NPDES Permit )  
No. CA0055387), California Regional )  
Water Quality Control Board, Los )  
Angeles Region. Our File No. A-100 )

Order No. WQ 77-22

BY THE BOARD:

Mobil Oil Corporation (petitioner) operates a refinery at 3700 West 190th Street, Torrance, California. On March 10, 1975, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) adopted Order No. 75-25 (NPDES Permit No. CA0055387) prescribing waste discharge requirements for the petitioner's discharge of rainfall and storm water runoff from refinery and tank storage areas. Having filed a petition on April 7, 1975, and an amended petition on June 16, 1975, the petitioner seeks review by this Board of certain portions of Order No. 75-25.

I. BACKGROUND

The petitioner discharges up to 7.2 million gallons per day of storm water runoff during periods of rainfall from refinery and tank storage areas and from adjoining properties to a flood control drain which joins the Dominguez Channel, near Avalon Boulevard. The petitioner has developed a system of drains for collecting and transporting runoff. Runoff from adjoining properties is directed into some of the same drains as is its own runoff.<sup>1/</sup> Storm water runoff is collected in a 23.1

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1. See petitioner's exhibit C-3.

million gallon capacity retention basin and floating oil is skimmed off. The water is then pumped to a gravity oil water separator and oil absorbent material is used to treat the water prior to discharge. After the storm water runoff has passed through the treatment system (approximately 1 to 2 days), any retained wastewater is pumped to the industrial sewer line.<sup>2/</sup> The beneficial uses of the Dominguez Channel receiving water include: non-water-contact recreation and the propagation and sustenance of marine life.<sup>3/</sup>

## II. CONTENTIONS AND FINDINGS

The contentions of the petition and our findings relative thereto are as follows:

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2. See Findings 1 and 2, Order No. 75-25
  3. See Water Quality Control Plan Report, Los Angeles River Basin (4B) Part I, Section 1, Chapter 1.

Order No. 75-25 indicates the beneficial uses of Dominguez Channel include "marine habitat" as opposed to the "propagation and sustenance of marine life" contained in the Water Quality Control Plan.

This discrepancy exists, apparently, because Order No. 75-25 was based on the interim Water Quality Control Plan. The current Water Quality Control Plan was adopted by State Board Resolution No. 75-21 on March 20, 1975, and Order No. 75-25 was adopted on March 10, 1975. In any event, the two standards are essentially the same.

1. Contention:

Effluent Limitations A.3 and A.4<sup>4/</sup> should be deleted from Order No. 75-25 because the rate at which rainfall runoff occurs cannot be controlled nor accurately measured.

Findings: Guidelines by the State Board for the Regional Boards suggest that Effluent Limitations A.3 and A.4 be included in NPDES permits.<sup>5/</sup> The petitioner is under the misapprehension that these provisions limit the rate that treated storm water effluent may be discharged. That is not the case. Effluent Limitation A.3 is the method for calculating the daily mass emission rates for

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4. Effluent Limitations A.3 and A.4 provide:

"3. The daily discharge rate shall be obtained from the following calculation for any calendar day:

$$\text{Daily discharge rate} = \frac{8.34}{N} \sum_{i=1}^N Q_i C_i$$

in which N is the number of samples analyzed in any calendar day.  $Q_i$  and  $C_i$  are the flow rate (MGD) and the constituent concentration (mg/l) respectively, which are associated with each of the N grab samples which may be taken in any calendar day. If a composite sample is taken,  $C_i$  is the concentration measured in the composite sample and  $Q_i$  is the average flow rate occurring during the period over which samples are composited.

"4. The 30-day average discharge rate shall be the arithmetic average of all the values of daily discharge rate calculated using the results of analyses of all samples collected during any 30 consecutive calendar day period. If fewer than four samples are collected and analyzed during any 30 consecutive calendar day period, compliance with the 30-day average rate limitation shall not be determined."

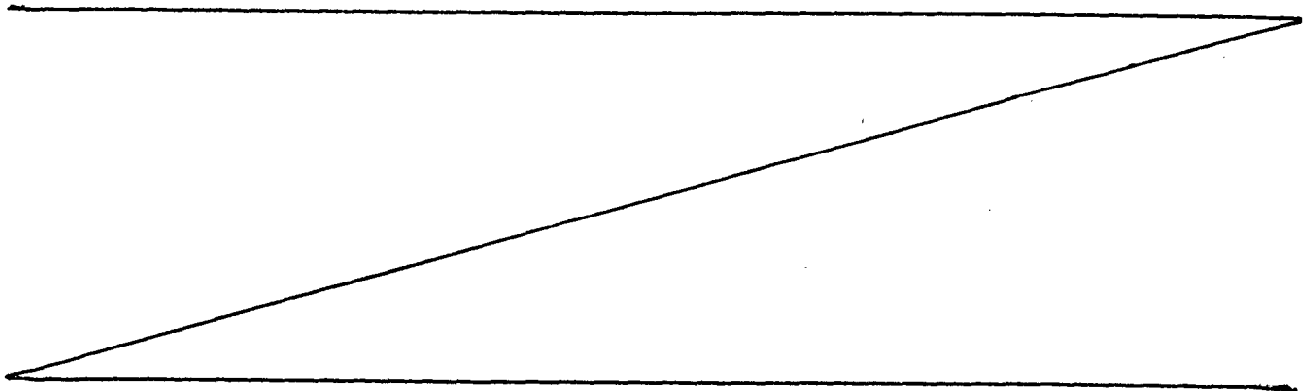
5. Section 4036 and Format 4036(2) and (3) Procedures Manual, Part II March, 1975.

certain pollutants which must be limited in the discharge. Effluent Limitation A.4 is the method of calculating the 30-day discharge rate of those same pollutants. While the petitioner does have the obligation to control the pollutants contained in the runoff of rainwater, Effluent Limitations A.3 and A.4 do not limit the quantity of rainwater discharged.

2. Contention:

The petitioner contends that it should not be held accountable for the quality of rainfall runoff coming from adjacent properties.

Findings: One problem Order No. 75-25 seeks to correct is that resulting from rain falling upon and running over surfaces contaminated with pollutants (e.g., oil) from the petitioners operations. These pollutants are picked up and carried along by the runoff and, after treatment, are discharged to a lateral which joins the Dominguez Channel. Similarly, the petitioner alleges that contaminated runoff is discharged to its premises from adjacent properties and the petitioner believes it should not be required to remove the pollutants in the contaminated runoff from the adjacent properties.



Under the circumstances present in this matter, we disagree. The petitioner is under no obligation to accept runoff in greater quantity or of lesser quality than would occur naturally.<sup>6/</sup> Indeed, in developed urban environs, such as the petitioners', an adjoining land owner may be compelled to dispose of surface water directly to a sewer or a drain.<sup>7/</sup> We conclude, therefore, that when a discharger acquiesces to the discharge of polluted runoff to his property which is then comingled with his own contaminated runoff, the discharger may be held accountable for the quality of discharged wastewater.

3. Contention:

The petitioner requests that the limits for Biological Oxygen Demand (BOD) and Total Organic Carbon (TOC) be deleted from Effluent Limitation A.2 in Order No. 75-25.<sup>8/</sup>

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6. Waters, 52 Cal.Jur.2d §727.
  7. Waters, 52 Cal.Jur.2d §729.
  8. Effluent Limitation A.2 provides:

"The discharge of an effluent in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Discharge Rate (lbs/day)**</u>		<u>Concentration Limit*</u>	
	<u>Daily</u>	<u>30-Day Average</u>	<u>Average</u>	<u>Maximum</u>
Oil and grease	900	600	10	15
Phenols	12.0	6.0	0.1	0.2
BOD <sub>5</sub> 20°C	1,800	1,200	20	30
TOC	2,100	-----	----	35
Solids	90,000	90,000	----	1,500

Findings: While there are no federal effluent guidelines for BOD in stormwater runoff from this type of facility, the Water Quality Control Plan for the Los Angeles River Basin<sup>9/</sup> establishes the following objective for the Dominguez Channel:

"Dissolved oxygen . . . shall not fall below 5.0 mg/l at any time as the result of waste discharges; when natural factors cause lesser concentrations, then controllable water quality factors shall not cause further reduction."

It is further stated, in the Water Quality Control Plan, that "Dissolved oxygen frequently is below prescribed levels" for the Dominguez Channel.<sup>10/</sup>

Since the depletion of dissolved oxygen in the Dominguez Channel is a problem, the Regional Board is required to prescribe waste discharge requirements that will prevent a discharge from causing further depletion of dissolved oxygen in the receiving waters.

The parameters used, normally, for measuring oxygen depletion are BOD, TOC and chemical oxygen demand. While one of these parameters must be included in waste discharge requirements, it is unnecessary that parameters for both BOD and TOC be contained in Order No. 75-25. Of the two parameters BOD, is preferable.<sup>11/</sup>

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9. Water Quality Control Plan Report, Los Angeles River Basin (4B), Part I, Chapter 4, Page 7.
  10. Water Quality Control Plan Report, Los Angeles River Basin (4B), Part II, Chapter 15, Table 15-61, Page 128.
  11. The Regional Board removed the TOC requirement from Order No. 75-25, in Order No. 76-177, on November 25, 1976.

Responding to a similar contention made by the Shell Oil Company, State Board Order No. WQ 76-13, pages 7 and 8, stated:

". . . . [m]aintenance of the ... dissolved oxygen objective in the receiving water is primarily dependent upon the total daily mass loading of oxygen consuming substances [in the receiving waters] and not upon the concentration at which substances are discharged.

"Nevertheless, both federal and state regulations require dischargers to '... maintain in good working order and operate as efficiently as possible any facilities or systems of control installed ... to achieve compliance with waste discharge requirements. BOD removal is one measure of the efficiency of a treatment system such as that of the petitioner.

"Consequently, although the dissolved oxygen objective for the [receiving water] is primarily dependent upon total mass loading of oxygen consuming substances rather than discharge concentrations, we conclude that the Regional Board may, under the circumstances of this case, prescribe BOD [concentration] effluent limitations ... in order to assure efficient operations of the petitioner's treatment facilities. However, the record before us does not demonstrate that BOD concentration limits ... were based upon the BOD limits which would be achieved by the petitioner's systems if it were efficiently maintained and operated."<sup>12/</sup>

The foregoing quotation is directly applicable to this contention and we conclude that it is appropriate for the Regional Board to regulate both BOD mass loading as well as require BOD concentration effluent limitations to assure an efficiently maintained and operated system.

The Regional Board should establish concentration limits which can be achieved by efficient operation of the petitioner's

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12. The words in brackets [] are additions to the quotation for clarification. For a similar State Board ruling see State Board Order No. W. Q. 77-18, regarding the Texaco Wilmington Refinery.

treatment system. The Regional Board record does not establish whether the 20 mg/l average and 30 mg/l maximum standard included in Order No. 75-25 is appropriate for this purpose. Adjustments in the concentration limit may be necessary after a sufficient record of operation is established. If concentration limits are amended upward, the Regional Board must, of course, ensure that any change in mass emission rates corresponding to the revised concentration limits is consistent with the receiving water objectives discussed above.

4. Contention:

The petitioner asserts that the average 10 mg/l and maximum 15 mg/l concentrations for oil and grease required by Effluent Limitation A.2 are too stringent.<sup>13/</sup>

Findings: The Water Quality Control Plan for the Los Angeles Basin provides the following objective for inland surface waters:

"Waters shall not contain oil, grease, or material of petroleum origin in concentrations that create or cause to be created a visible film on the surface of water, that cause nuisance or that otherwise adversely affect beneficial uses."<sup>14/</sup>

However, in providing for "... the quality requirements for waste discharges to the ocean " in the Ocean Plan<sup>15/</sup> the State Board required the same average and maximum concentrations for oil and grease as are included in Effluent Limitation A.2. While

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13. See Footnote 8, supra.

14. Water Quality Control Plan Report, Los Angeles River Basin (4B), Part 1, Chapter 4, 1-4-6.

15. Water Quality Control Plan, Ocean Waters of California, Chapter IV, Table A.



the petitioner does not discharge to the ocean directly, it makes little sense to impose less stringent requirements for receiving waters having much lower dilution and assimilative capacity than the ocean. We note, additionally, that the petitioner's application for waste discharge requirements reported an average concentration of 4.0 mg/l and a maximum concentration of about 15 mg/l for oil and grease in its discharge. Under these circumstances, we conclude that the effluent limitations for oil and grease as provided by Order 75-25 are appropriate.

Finally, the Environmental Protection Agency Guidelines for the Petroleum Refining Point Source Category,<sup>16/</sup> as we read them, require that the maximum oil and grease concentration limitation of 15 mg/l be imposed on stormwater runoff from refineries.

5. Contention:

The petitioner maintains that the 0.1 mg/l average and 0.2 mg/l maximum concentration limits for phenols provided by Effluent Limitation A.2<sup>17/</sup> are too stringent and should be relaxed to 0.5 mg/l average and 1.0 mg/l maximum concentration consistent with the Ocean Plan.

Findings: Responding to a substantially identical contention by the Shell Oil Company, State Board Order No. WQ 76-13, pages 9 and 10, stated:

"The Basin Plan requires that the receiving waters in the Los Angeles-Long Beach harbor shall be protected

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<sup>16/</sup> Title 40 CFR Part 419

<sup>17/</sup> See Footnote 8, supra.

from toxic substances...."

"A survey of technical literature indicates that toxic concentrations (96 - hr Tlm) of phenols have been shown to range from 5 mg/l to 25 mg/l for various forms of marine life. The same technical authorities suggest that receiving water concentration of phenols of 0.2 mg/l will not interfere with fish and aquatic life."

"While it is patently clear that the Regional Board is empowered to establish concentration limits to protect receiving waters from toxic substances, the concentration limits established for phenols are equivalent to five times more stringent than those contained in the Ocean Plan. The Ocean Plan limitation of 0.5 mg/l average and 0.1 mg/l maximum will protect aquatic life and in order to avoid encouraging the discharge of wastes to more limited bodies of water possessing less dilutional capacity than the ocean, the phenol limitation should not be less stringent than required by the Ocean Plan."

The foregoing position taken by the State Board is directly applicable to this contention and we conclude that the 0.5 mg/l average and 1.0 mg/l maximum concentration limitations for phenols in the Ocean Plan should be applied to the petitioner.

6. Contention:

Effluent Limitation A.7<sup>18/</sup> prohibiting the discharge of oil or grease should be deleted because the State Board and EPA have agreed not to reference Standard Provision 10<sup>19/</sup> in permits.

Finding: Responding to the same contention by Texaco, Incorporated, State Board Order No. WQ 77-18, pages 6 and 7, states:

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18/ Effluent Limitation A.7 provides:

"Wastes discharged shall not contain visible oil or grease, and shall not cause the appearance of grease, oil or oily slick, or foam in the receiving waters or on channel banks, walls, inverts, or other structures."

19/ Standard Provision 10 provides:

"There shall be no discharge of harmful quantities of oil or hazardous substances as specified by regulations adopted pursuant to Section 311 of the Federal Water Pollution Control Act, or amendments thereto."

"We disagree with the petitioner's argument. Standard Provision 10 was dropped in order to avoid the possibility of dual enforcement proceedings under Sections 311 and 402 of the Federal Water Pollution Control Act. However, this does not mean that a Regional Board cannot adopt oil and grease standards. The Water Quality Control Plan for the Los Angeles Basin includes water quality objectives for oil and grease. The Plan states:

'Waters shall not contain oil, grease, or materials of petroleum origin in concentrations that create or cause to be created a visible film on the surface of the water, that cause nuisance, or that otherwise adversely affect beneficial uses.'

"The Regional Board has prescribed both limitations on oil and grease concentrations and on visible oil and grease caused by the discharge. The former is readily measurable and provides a justifiable basis for enforcement proceedings, while the latter is adequate to protect the esthetic quality of the [receiving waters]. We find the Regional Board's action in prescribing limitations on the visible oil and grease for this discharge to be appropriate and proper."<sup>20/</sup>

The foregoing quotation is directly applicable to this contention without amplification or modification.

7. Contention:

The petition requests that compliance with the effluent limitation for oil and grease<sup>21/</sup> be determined by the

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<sup>20/</sup> The words in brackets [] are for clarification.

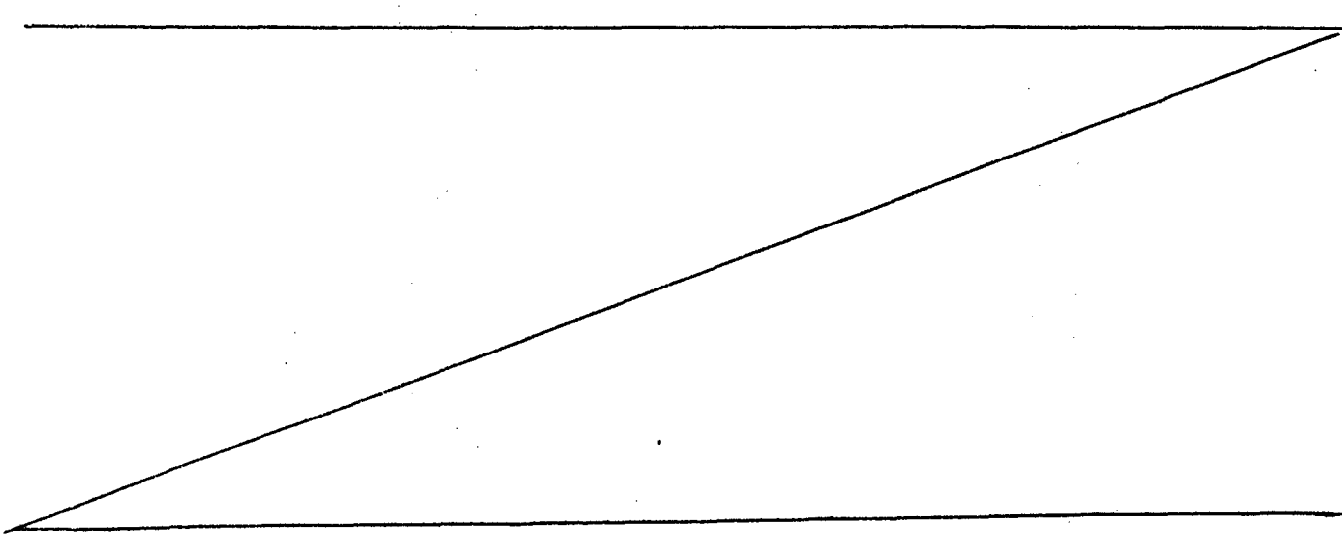
<sup>21/</sup> See Footnote 9, supra.

Hexane Soxhlet Extraction method, as opposed to liquid--liquid extraction with Trichlorotrifluorethane gravimetric as required by Order No. 75-25.

Finding: Responding to the same contention by Shell Oil Company, State Board Order No. W. Q. 76-13, pages 11 and 12, stated:

"Regulations of the State Water Resources Control Board (State Board) require that "[m]onitoring requirements shall include any national monitoring...requirement specified in Federal regulations. Federal regulations require that Standard Method 137 shall be used to determine compliance with effluent limitations for oil and grease. It should be noted, however, that federal regulations also make provision for the discharger to make application for alternate test procedures with the State Board. Unless the petitioner makes application for the alternate test procedure and receives approval, the Regional Board must require the test method specified by federal regulations."

The foregoing language is directly applicable to this contention without amplification or modification.



8. Contention:

The petitioner requests that the requirement for monitoring receiving waters as provided by the Monitoring and Reporting Program No. 3742<sup>22/</sup> be deleted because of physical danger involved in obtaining samples.

Finding: The monitoring program requires sampling of the turbidity in receiving waters at three locations in Flood Control Channel 587. Access to the receiving waters is necessary to obtain samples for turbidity measurements. Photographs, submitted by the petitioner, indicate that access to Flood Control Channel 587 is a problem.<sup>23/</sup> Inasmuch as the petitioner did not suggest alternate sampling locations, the Executive Officer of the Regional Board should consult with the petitioner regarding alternate sampling locations and, after investigation of petitioner's objectives, specify a monitoring program that will provide the necessary information while minimizing the access problem.

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Receiving Water Monitoring

Sampling stations shall be established at the following locations where representative samples of the receiving water can be obtained.

<u>Station</u>	<u>Description</u>
R - 1	Flood Control Channel 587, immediately upstream of the point of discharge.
R - 2	Flood Control Channel 587, east side of Van Ness Avenue, at point of discharge.
R - 3	Flood Control Channel 587, downstream from discharge, near Del Amo Boulevard.

The following shall constitute the receiving water monitoring program:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
Turbidity	TU	grab	Once per discharge day

23/ Exhibit D-2 and D-3.

III. CONCLUSIONS AND ORDER

After review of the record and the contentions of the petitioner and for the reasons heretofore expressed, we have reached the following conclusions:

1. The Regional Board should revise the concentration effluent limitations for BOD in Order No. 75-25, to concentration limitations that will assure efficient operation of the treatment facility.

2. The Regional Board should revise the concentration effluent limitation for phenol, in Order No. 75-25, to conform to Ocean Plan Limitations for phenol.

3. The Executive Officer of the Regional Board should specify a receiving water monitoring program that will provide the necessary information for turbidity after consulting with the petitioner and after investigating any objections of the petitioner.

4. In all other respects, the action of the Regional Board was appropriate and proper.

IT IS, THEREFORE, ORDERED that this matter be referred back to the Regional Board for reconsideration and modifications as herein discussed.

Dated:

Sept 22, 1977

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John E. Bryson, Chairman

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W. Don Maughan, Vice Chairman