California Regional Water Quality Control Board

Los Angeles Region

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TO: Alex P. Mayer
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[Original Signed by Michael Lauffer for]
FROM: Dennis Dickerson
Executive Officer
LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

DATE: April 24, 2002

SUBJECT: RESPONSE OF THE REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION TO ISSUES IDENTIFIED IN APRIL 11, 2002, LETTER FROM THE STATE WATER RESOURCES CONTROL BOARD CONCERNING RETAIL GASOLINE OUTLETS AND THE PETITION OF THE WESTERN STATES PETROLEUM ASSOCIATION CONCERNING WASTE DISCHARGE REQUIREMENTS ORDER NO. 01-182 FOR MUNICIPAL STORM WATER AND URBAN RUNOFF DISCHARGES [NPDES NO. CAS004001] WITHIN LOS ANGELES COUNTY, EXCEPT FOR LONG BEACH)
SWRCB/OCC FILES A-1430(b) AND A-1448(f)

INTRODUCTION

On December 13, 2001, the California Regional Water Quality Control Board, Los Angeles (LA Regional Board) unanimously adopted the Los Angeles County municipal separate storm sewer system (LA MS4) permit. The permit was the third iteration of the LA MS4 permit, and like all successive MS4 permits, the LA MS4 permit incorporates incremental best management practice (BMP) provisions to reflect the Clean Water Act requirement to "reduce the discharge of pollutants to the maximum extent practicable" and to "effectively prohibit non-stormwater discharges into the storm sewers." (33 U.S.C. § 1342(p)(3).)

The refined permit extends certain structural BMP requirements to certain retail gasoline outlets (RGOs) in recognition that RGOs contribute significant pollutant loads to urban runoff in the Los Angeles region. The irrefutable conclusion about RGO pollutant loading was reached by the LA Regional Board and developed from extensive literature research and from critical source studies undertaken by the LA MS4 dischargers. Petitioner Western States Petroleum Association's (Petitioner) arguments do not challenge or refute the LA Regional Board's conclusions about the

need for action and the need for permit improvements, relative to RGOs. Permit improvements were necessary because prior efforts by the LA MS4 dischargers have continued to allow highly polluted storm water discharges, including polluted discharges from RGOs, into the region's waters.[1]

The LA Regional Board carefully considered State Water Resources Control Board (State Board) precedential orders in developing the permit requirements relevant to RGOs. Petitioner contends that the LA Regional Board ignored the State Board's existing RGO orders and acted without adequate justification. Petitioner's argument is wrong. There is substantial evidence in the record to support the LA Regional Board's threshold criteria and requirements. While the MEP standard is designed to be flexible, the LA MS4 permit contains the requisite flexibility to allow dischargers to identify structural BMPs to achieve the specified numeric design criteria. A careful review of the entire record shows that the Regional Board lawfully executed its legal duties based on the record before it. The State Board should uphold the LA MS4 permit's RGO provision.

DISCUSSION

THE REGIONAL BOARD HAS MET THE EVIDENTIARY REQUIREMENTS ESTABLISHED IN THE STATE BOARD'S ORDERS NOs. WQ 2000-11 (LA SUSMP ORDER) AND WQ 2001-15 (SAN DIEGO MS4 ORDER) FOR INCLUSION OF RGOs

The Regional Board has satisfied the conditions articulated by the State Board for the inclusion of RGOs. Substantial evidence in the record supports the Regional Board's action to include RGOs within the high-priority development categories, to establish thresholds for RGOs subjected to the criteria, and to establish an initial list of RGO BMPs. Permit Findings B.1 through 11 discuss the substantial impacts of urban runoff generally. But specifically Findings B.8, 9, 10, and 11 highlight the magnitude of the RGO runoff problem.[2]

In response, the LA Regional Board crafted Part 4.D.4.e of the Order. Part 4.D establishes the Development Planning Program for the LA MS4 permit and in particular numeric design criteria for certain projects. Importantly, Part 4.D does not require numeric design criteria to all RGOs, but instead, only RGOs that exceed two threshold criteria: one based on size and the other on traffic flow.[3] Part 4.D.4.e threshold criteria are designed to apply design criteria to those RGOs with the greatest potential to contaminate storm water.[4] The Regional Board's criteria were subject to considerable public review and debate. Petitioner's claims that treatment control BMPs are ineffective, infeasible, costly and pose safety risks ring hollow, given the fact that RGO members of

[1] LA Regional Board Order No. 01-182, Findings B.1-11.
[2] LA MS4 Administrative Record (LAAR) Vol. 11, Item 328 at pp. 3-5.
[3] *Id*., Part 4.D.4.e at pp. 37-38.
[4] *Ibid*.

Petitioner in the Pacific Northwest have been implementing such BMPs since 1992, when they were required to do so by Puget Sound municipalities.[5] Petitioner's contentions have no merit.

THE PERMIT LAWFULLY ESTABLISHES NUMERIC MITIGATION AND THRESHOLD CRITERIA FOR NEW AND REDEVELOPED GAS STATIONS WITH PROPER JUSTIFICATION

The LA SUSMP Order recognizes the Regional Board's authority to include RGOs in the standard urban storm water mitigation plan (SUSMP) categories, provided there are adequate findings supporting RGOs as a category and that appropriate threshold criteria have been developed.[6] Last fall, the State Board set aside RGO requirements in the San Diego MS4 permit, because the San Diego Regional Board had not provided adequate findings and support for including RGOs.[7] The San Diego MS4 Order notes that it is incumbent upon the "Regional Water Board to justify the inclusion of RGOS in the permit findings or in a final fact sheet, and to consider an appropriate threshold."[8] The LA Regional Board's extensive studies, findings, and consideration of comments, in applying design criteria to RGOs meeting threshold criteria, more-than satisfy State Board direction.

Since the LA SUSMP Order, the Regional Board staff has extensively studied the issue of storm water quality from RGOs and the feasibility of treatment control BMPs. Regional Board staff prepared three comprehensive analyses before the permit was adopted. These analysis included: "Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts," Radulescu, Swamikannu, and Hammer, 2001 (RGO Technical Report); "Storm Water Quality Task Force BMP Guide; Review and Comment," Radulescu, 2001 (RGO BMP Review Report); and "Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts - Supplement," Radulescu and Swamikannu, 2001 (RGO Technical Report Supplement).[9] The RGO Technical Report documents the significant pollutant contribution from RGOs.[10] The RGO Technical Report was included in the materials available for the July 26, 2001 workshop—six months before the LA Regional Board adopted the Order. In light of this substantial evidence, the MS4 permit includes provisions to extend SUSMP numeric mitigation criteria to RGOs.

In extending SUSMP numeric mitigation criteria to RGOs, staff analyzed carefully the issues of concern raised by the State Board in the LA SUSMP Order such as over-regulation, small size, treatment feasibility, and personnel safety. The technical reports prepared by staff were

[5] LAAR, Vol. 11, Item 328 Section H at p. 8. See E-mail from Mr. Ciuba at Washington Department of Ecology to Dr. Swamikannu where he states, "…gas station BMPs in the New Manual (published last week) is virtually the same as in the 1992 Manual", LAAR, Item 230.
[6] LA SUSMP Order at pp. 22-23.
[7] San Diego MS4 Order at p. 15.
[8] *Ibid.*
[9] LAAR, Items 150, 160 at Section 5E, and 328 at Sections G and H
[10] RGO Technical Report, at pp. 4-5, 10-11.

circulated and subject to public review and debate. In response to State Board's concerns, the MS4 permit establishes threshold criteria that trigger numeric design standards.[11] Staff considered the impervious surface area, the projected average daily traffic, and the projected volume of gasoline sales as criteria.[12] In analyzing the likelihood of the criteria to predict storm water pollutant loading, staff proposed a two-part threshold. First, the RGO must create 5,000 square feet of impervious surface. Second, the RGO must have a projected trip generation of 100 or more motor vehicles average daily traffic. A RGO that meets both criteria would be subject to SUSMP numeric design standards. The criteria ensure that SUSMP design criteria are targeted at those RGOs that have the greatest potential to contribute pollutants to the MS4.[13]

Petitioner contends that the Regional Board's justification is not proper and have prepared two technical reports, (1) "Review of Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts," WSPA, 2001 (Geomatrix Report),[14] and (2) "Review of Supplement Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts," WSPA 2002 (Geomatrix Supplement). The Geomatrix Report was submitted as a comment during the development of the permit. In response to the Geomatrix Report, the Regional Board staff developed a responsive report, part of the staff's response to comments, that was fully considered by the LA Regional Board at December 13, 2001, hearing. Such an approach is entirely consistent with USEPA regulations.[15] The responsive document soundly refutes the issues raised in the Geomatrix Report, as detailed below.

Further, the Geomatrix Supplement was prepared more than a month after the LA Regional Board's adoption of the permit. The report is not part of the administrative record for the LA Regional Board's, and cannot provide substantial evidence in support of or against the Regional Board's permitting action.[16] The Regional Board respectfully request that the document be excluded from the State Board record on the matter.[17]

RGOs REPRESENT A SIGNIFICANT POTENTIAL SOURCE OF POLLUTANTS TO RECEIVING WATERS

The LA Regional Board's Technical Reports on RGOs amply demonstrate that studies around the nation have demonstrated that RGOs are a significant potential source of storm water pollutants.[18] Consequently, RGOs have been designated as storm water pollutant hotspots by several areawide MS4 programs including in New York, Maryland, Western Washington, Oregon,

[11] See RGO Technical Report, pp. 8-9.
[12] *Ibid.*
[13] RGO Technical Report, p. 9.
[14] LAAR, Vol. 11, Item 328 at Sections G.
[15] 40 CFR § 124.17.
[16] See, e.g., *Western States Petroleum Assn. v. Superior Court* (1995) 9 Cal.4th 559, 571.
[17] Such action would be consistent with State Board review of the San Diego MS4 Petition (Order WQ 2001-15 at p. 15, LAAR, Vol. 11, Item 328, 10 F.2 (where documents for inclusion of RGOs submitted by the Regional Board after the hearing were not considered because they were not subject to public review and debate).
[18] See, e.g., Order No. 01-182, Findings B.10-11.

and Virginia, and are subject to special review for new development and redevelopment controls.[19] Similar studies in the Los Angeles region have demonstrated automotive related land uses such as RGOs and parking lots generate significant concentrations and loads of pollutants of concern in storm water.[20]

Numerous studies conducted in California and around the U.S. have identified heavy metals, oil and grease and Polycyclic Aromatic Hydrocarbons (PAHs) as the major pollutants of concern in storm water discharges from RGOs.[21] Both heavy metals and PAHs transported in storm water have been identified as the major cause of aquatic toxicity or sediment contamination in Santa Monica Bay.[22]

The weight of the evidence in the record, coupled with the LA Regional Board's expertise in storm water issues, supports Findings B.1-11, and the Regional Board's efforts to reduce storm water discharges from RGOs.

THE SOURCE CONTROL BMPs IN THE STORM WATER QUALITY TASK FORCE MANUAL ARE DEFICIENT

Petitioner contends that the Storm Water Quality Task Force ("Task Force") BMPs are sufficient and constitute MEP for RGOs. Initially, the Regional Board observes that the MEP standard applies to permittees, and not to the entities regulated by the MS4 permittees. Further, the Regional Board concluded that the Task Force BMPs were insufficient. During permit development LA Regional Board staff reviewed and found the Task Force BMPs, wanting, deficient, and out-of-date in the RGO BMP Review Report.[23] As the RGO BMP Review Report concluded, the Task Force BMPs are virtually a restatement of storm water source controls identified by the USEPA in early 1992,[24] and presumably were being implemented at RGOs since that time. As the evidence concludes, RGOs remain a significant source of pollutant loading.

Petitioner provide no evidence that the Task Force BMPs alone are doing the job of reducing pollutants in storm water discharges so that they do not cause or contribute to impairment of receiving waters. Moreover, source control BMPs alone, similar to those suggested by the Task Force BMPs, were proven insufficient to adequately control the quality of storm water runoff. The Critical Sources Study[25] performed by the LA MS4 Permittees as required under the 1996 permit, showed that preventive-type BMPs in the form of good housekeeping and spill containment measures did not achieve a significant improvement in the quality of storm water runoff after the

[19] See discussion in our Technical Reports. LAAR, Item 160 at H-8 and LAAR, Item 328 at p. 432.
[20] See LAAR – Supporting Documents (LAAR – SD), Items 44, 50, 117 are a sampling of local studies that demonstrate the pollution potential of storm water discharges from automotive related land uses.
[21] See LAAR, Item 160 at H-8 and LAAR, Item 328 for references and discussion.
[22] See LAAR - SD, Item 105 for an Executive Summary of the study findings.
[23] See LAAR, Item 328 at G1 for our review of the Task Force BMPs.
[24] See LAAR, Item 314
[25] See LAAR - SD, Items 115, 116, 117 and 118

source control BMPs implementation. The Critical Sources Study focused, among other industries, on Automotive Repair and Motor Freight facilities, which are also automobile intensive land uses as RGOs, and subject to similar type of pollutant sources. Simply put, preventative BMPs have failed at RGOs.

EFFECTIVE TREATMENT AND INFILTRATION TYPE BMPs HAVE BEEN IMPLEMENTED AT RGOs OUTSIDE OF CALIFORNIA SUCCESSFULLY FOR A DECADE

Petitioner contends that treatment control BMPs are not effective, not feasible, not safe, and are not necessary at RGOs. The LA Regional Board has already established that treatment control BMPs are necessary above. RGOs contribute significant pollutant loads and impair receiving waters in the Los Angeles Region. The record also demonstrates that treatment control BMPs are effective, feasible, and safe.[26]

Petitioner makes a poor attempt to defeat treatment control BMPs by focusing on the least effective of these BMPs for RGOs—namely, confined unventilated systems which may pose safety concerns, and drain-inlet inserts.[27] In developing the LA MS4 permit, the Regional Board reviewed MS4 Programs from around the country and identified several different BMPs that are being implemented. These treatment control BMPs include, sand filters, stormceptors, stormfilters, multi-chamber treatment trains, and oil/sediment separators.[28] The RGOs are free to implement any mixture of structural BMPs to achieve the numeric design criteria specified in the permit.

Sand filters (a type of infiltration BMP) have been used at RGOs to treat storm water rather successfully, outside of California, for more than a decade. Sand is an excellent straining medium for heavy metals and PAHs and clean-out is easy and the need for maintenance less frequent.[29] Similarly, pre-fabricated treatment control BMPs (such as stormceptors and stormfilters) appear to be effective in removing pollutants of concern in storm water discharges from RGOs.[30]

The LA Regional Board believes that specifying a numeric design criteria and then affording RGOs the flexibility to select BMPs is the best approach. In assessing this flexible approach, Regional Board staff considered costs of implementation of treatment control BMPs at RGOs. The literature review demonstrated that costs of implementation are reasonable.[31] The cost of installation of treatment control BMPs seems to be between 1.75 – 2.3 percent of the project cost. The administrative record fully supports the Regional Board's permitting action.

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[26] See LAAR, Item 160 at H-8 and LAAR, Item 328 for a complete discussion.
[27] See Petition at 11 and 13.
[28] See LAAR – SD, Items 31, 39, 46, 48
[29] *Hydrocarbon Hotspots in the Urban Landscape,* Article 2, Center for Watershed Protection, LAAR – B, Item 166
[30] LAAR – SD, Items 96 and 98
[31] See RGO Technical Report and RGO Technical Report Supplement, discussed *ante*.

Nonetheless, the State Board in its consolidation notification letter recommended that the Regional Boards address the issue of treatment or infiltration BMPs at RGOs. As a result, Regional Board staff have contacted regulatory agencies in other states notably in the Pacific Northwest and in the East who have required the implementation of treatment control BMPs at RGOs for nearly a decade.

The staff's communication with the Washington State Department of Ecology confirmed RGO threshold criteria and that WSPA member RGOs have been implementing treatment control BMPs in the Puget Sound area since 1992.[32] More recently, after reviewing the scope of the State Board's consolidation notice, staff contacted the Government of the District of Columbia, on their experience with the installation of treatment control BMPs at RGOs since inception of the program in late 1980s. A representative of the agency responded via e-mail, to our query as to how many had been installed at RGOs and whether infiltration or safety problems (such as explosions) had been encountered, as follows:

> [We are] still in the process of inventorying all of our storm water BMPs. The best I could give you right now is a educated guess of ~ 20 DC water quality sand filters for gasoline stations for the District of Columbia. A number of other types of storm water BMP are also in use at gas stations, primarily "Stormceptors".
> I am sure that we have had no explosions or ground water contamination problems associated with any of these devices. The devices should be water tight and inspected /serviced at least annually to ensure that accumulated materials do not reach hazardous waste levels. Of course after any type of spill the device should be serviced immediately.[33]

Form the Regional Board's inquiry of peer MS4 regulatory agencies in the U.S., it is apparent that treatment control BMPs at RGOs are necessary, feasible, and safe. The Regional Board does not consider these communications to be a part of the administrative record for the LA MS4 permit, but nonetheless, these communications demonstrate that the numeric design standard affords RGOs an opportunity to implement myriad structural BMPs successfully in use outside of California. Regardless as to how the State Board intends to address the issue, the Regional Board had adequate authority and substantial evidence in the record to specify numeric design criteria and allow RGOs to identify the suitable, safe structural BMPs.

[32] See, *ante*, note 14.
[33] E-mail from Walter K. Caldwell, District of Columbia/Dept. of Health, Water Programs Division, March 20, 2002.

PETITIONER'S REMAINING CONTENTIONS CONCERNING MANNER OF COMPLIANCE, CEQA, APA, AND UNFUNDED MANDATE HAVE ALREADY BEEN ADDRESSED IN OTHER PROCEEDINGS

Prior to de-consolidating Petitioner's petition from the remaining LA MS4 petitions, the State Board had already indicated its intent not to address issues regarding manner of compliance, the California Environmental Quality Act, the Administrative Procedure Act, and the unfunded mandates provision of the California Constitution.[34] These challenges have already been considered and squarely rejected in prior State Board precedent. As such, these contentions are not addressed in this response. On general issues of what reflects MEP and the Regional Board's ability to specify BMPs, the Regional Board incorporates by reference its April 2, 2002, response to the other LA MS4 petitions.

CONCLUSIONS

RGOs are a significant potential sources of storm water pollutants. This conclusion is supported by the scientific literature and the administrative record. These pollutants such as heavy metals and PAHs have been known to cause the impairment of beneficial uses in receiving waters. As a source of pollutants, storm water runoff from RGOs is similar to runoff from heavy automobile land uses such as driveways, roads, highways and parking lots. As recognition of this reality, and in order to meet local environmental protection concerns, many states and municipalities have designated RGOs as "hotspots" or "high risk" activities in their storm water management programs. As a consequence of this designation, the Regional Board lawfully concluded that RGOs must implement specified treatment control BMPs to manage the quality of storm water runoff to levels that will not adversely impact the quality of receiving waters.

It has been proven also that the treatment of storm water for RGOs is technically feasible, safe, and of reasonable cost. A number of local jurisdictions nationwide have required the implementation of these treatment devices since the late 1980s and early 1990s. New technologies are developed constantly and significant new progress in the recent years made the treatment devices more efficient and less expensive, with a smaller footprint and easier and safer maintenance. Petitioner's member facilities are already familiar with and have been implementing similar requirements for a number of years. Moreover, recent studies also demonstrated that source control BMPs alone, including such methods as pressure washing, are not sufficient to adequately control the quality of storm water runoff from automobile related land uses including RGOs.

The LA County MS4 Permit merely incorporates, among other management practices, the requirement of storm water treatment at new and redeveloped RGOs, to address the proven contributions of pollutants to the storm water runoff from these activities and their impact on local receiving waters. The LA County MS4 Permit follows the precedent of many storm water management programs around the nation addressing the same concerns, and meets the need to protect the quality of the region's receiving waterbodies.

[34] See February 25, 2002, letter from Elizabeth M. Jennings, to LA MS4 petitioners.

For the reasons outlined in the previously issued technical reports, identified in the Regional Board's order, and reiterated herein, the terms and conditions of LA Regional Board Order No. 01-182 regarding BMP mitigation design standards to RGOs should be upheld in their entirety. The Regional Board developed its numeric design criteria, threshold criteria, and proposed BMPs after careful consideration of the record before it. The Regional Board believes that BMPs and criteria accurately reflect MEP in light of the urban runoff problems of Los Angeles County, and that the LA MS4's requirements could be considered by regional water boards throughout the state.