

stored materials. Removal activities could pose both health and safety risks. (Attach. 1, p. 48.)

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These types of impacts are normally addressed prior to construction by conducting a Phase II site assessment to locate contaminants and hazards, and by performing a health risk assessment to determine appropriate worker protection requirements. (Attach. 1, p. 48.) However, these steps cannot be taken here because the DEIR fails to identify the type, amount, and location of contaminants and hazards.

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The DEIR appears to ignore worker health impacts because it claims the contaminated soils are regulated under hazardous waste law, and concludes that compliance with these requirements is expected to minimize the potential for significant impacts. (DEIR, p. 4-23.) However, existing laws do not adequately address construction at contaminated sites. (Attach. 1, p. 46.) Moreover, the DEIR provides no means to identify contamination during construction, nor any requirement to remediate contamination if it is found. (Attach. 1, p. 46.) Therefore, significant worker exposures to contaminated soil are possible and unmitigated.

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D. Water Quality Impacts

The DEIR concluded that the Project would benefit water quality by removing MTBE from gasoline. However, the DEIR ignores significant water quality impacts associated with ethanol use identified in authoritative studies conducted for the California Environmental Policy Council ("EPC Ethanol Report").³

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The EPC Ethanol Report concluded that in areas with existing hydrocarbon contamination, ethanol could increase the concentration of hydrophobic compounds such as benzene in groundwater and increase the distance that they would travel from a contaminated site. Compounds in standard gasoline are relatively immiscible in water, and, thus, benzene and other similar compounds tend to remain in the hydrocarbon phase which can be removed by pump and treat systems. However, ethanol is highly soluble and could leach benzene and other contaminants

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³ Health and Environmental Assessment of the Use of Ethanol as a Fuel Oxygenate, Report to the California Environmental Policy Council in Response to Executive Order D-5-99, vol. 3, p. 18 (Dec. 1999). We incorporate the EPC Ethanol Report by reference into our comments. The entire report is available online at <http://www.calepa.ca.gov/programs/mtbe/eotasks.htm>

from the hydrocarbon phase, from which they can be readily recovered, into the aqueous groundwater phase, from which they cannot be readily recovered.

These findings are particularly important to this Project because hydrocarbon contamination currently exists in groundwater in the vicinity of several of the ethanol blending terminals that Ultramar currently uses. (Attach. 1, p. 53.) In addition, the hazardous waste inventory prepared by DTSC pursuant to Government Code section 65962.5 indicates that groundwater contamination exists at at least 19 gasoline distribution terminals in the South Coast, including the Colton terminal, Carson terminal, and Wilmington terminal currently used by Ultramar. Therefore, spills or leaks of ethanol could rapidly reach the water table and solubilize and expand additional amounts of benzene and other toxic compounds. (Attach. 1, p. 54.) This could result in significant water quality impacts that were not considered in the DEIR.

The District should evaluate these impacts in a modified DEIR that is re-circulated for public comment.

III. THE DEIR FAILS TO IDENTIFY AND IMPOSE ENFORCEABLE MITIGATION MEASURES

Before an agency may find that measures have been incorporated into a project which mitigate or avoid significant effects on the environment, CEQA requires that the agency:

shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. (Pub. Res. Code § 21081.6(a)(1); *see also* CEQA Guidelines §§ 15091(d), 15097(a).)

The program "shall be designed to ensure compliance during project implementation" (Pub. Res. Code § 21081.6(a)(1)) and should include performance standards to allow for an appraisal of their effectiveness (SCAQMD CEQA Guidelines, p. 11-3 (March 1993)). In addition, mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. (CEQA Guidelines § 15126.4(a)(2); *see also* SCAQMD CEQA Guidelines, p. 11-2 (March, 1993).) Finally, mitigation measures must be fully defined in an EIR, or, at least, incorporate fully defined performance standards to

ensure that mitigation of significant impacts is feasible and will be implemented. (See, e.g., *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296 [248 Cal. Rptr. 352].)

The DEIR fails to adopt a reporting or monitoring program for most of the mitigation or avoidance measures proposed for the Project, fails to make the mitigation measures enforceable, defers development of mitigation without imposing performance standards, and, therefore, fails to ensure compliance with mitigation measures during project implementation. The District should fully define all mitigation measures, explain how mitigation measures will be made enforceable and define an adequate reporting or monitoring program for all of the required mitigation and avoidance measures and re-circulate the DEIR for public review and comment.

A. Mitigation for Significant Air Quality Impacts Is Not Enforceable

The DEIR fails to impose enforceable mitigation measures on construction emission sources.

The DEIR finds that construction sources would emit 649 pounds per day of CO, 211.4 pounds per day of VOCs, 513.2 pounds per day of NOx, and 34.2 pounds per day of PM10. (DEIR, pp. B-1, B-3.) To mitigate the emissions from the on-road portion of these emissions, the DEIR proposes to develop a Construction Emission Management Plan, which would be developed in the future. (DEIR, p. 4-17.) By not disclosing the contents of the Plan in the DEIR, the District has impermissibly deferred development of mitigation for this significant impact without imposing performance standards or criteria that will ensure mitigation of the significant effect. (See, e.g., *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296 [248 Cal. Rptr. 352].) Moreover, the few measures that are proposed to be included in the Plan are ineffective and do not comply with SCAQMD recommended mitigation measures. (Attach. 1, p. 8.)

The DEIR's proposed mitigation measure to control PM10 emissions from grading, open storage piles, and unpaved roads suffers from the same deficiencies. The measure proposes to develop a Fugitive Dust Emission Control Plan in the future, impermissibly deferring development of mitigation measures without imposing any enforceable performance standards or criteria to ensure that

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site assessment in the vicinity of any areas that are likely to be disturbed. (Attach.

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1, p. 48.) A construction monitoring program should also be required to help identify undiscovered contamination during construction. (Attach. 1, p. 49.) This program should specify that a registered environmental professional use a handheld PID and FID to monitor gases emitted by each load of excavated soil. (*Ibid.*) Soil samples should also be collected from a minimum of every 1,000 cubic yards of excavated soil and analyzed in an expedited fashion. (Attach. 1, p. 50.)

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In addition, the District must ensure that any contaminated soil that is identified is appropriately addressed. These measures should include a requirement that all construction within the vicinity will immediately stop until the finding is thoroughly investigated and remediated to the satisfaction of the responsible regulatory agency. (Attach. 1, p. 50.)

Without these measures, the DEIR's conclusion that there will be no significant impacts associated with contaminated soil and plugged and abandoned wells is unsupported.

IV. THE DEIR INCORRECTLY FINDS THAT CERTAIN MITIGATABLE IMPACTS ARE UNAVOIDABLE

The DEIR concludes that certain significant air quality impacts associated with Project construction and operation are unavoidable. (DEIR, p. 1-8.) In fact, several feasible mitigation measures exist that would allow Ultramar to avoid the significant air quality impacts identified in the DEIR. CEQA requires an agency to refrain from approving a project with significant environmental impacts if "there are feasible alternatives or mitigation measures" that can substantially lessen or avoid those impacts. (Pub. Res. Code § 21002; *Mountain Lion Foundation v. Fish and Game Commission* (1997) 16 Cal.4th 105, 134 [65 Cal.Rptr.2d 580].) The District must impose all feasible mitigation measures to avoid the significant air quality impacts identified in the DEIR or disapprove the Project.

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A. Air Quality Impacts From Construction Can Be Further Reduced

The DEIR concludes that "[c]onstruction emissions for CO, VOCs, and NOx are expected to remain significant following mitigation." (DEIR, p. 4-20.) However, the DEIR fails to evaluate several feasible mitigation measures that would further reduce these impacts.

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For example, requiring the use of PuriNOx in on-road and off-road construction equipment would reduce NOx impacts from these sources by 14-19%. (Attach. 1, pp. 14-15.) In addition, fuel additives can be used to improve combustion efficiency and reduce emissions. Two cetane improvers have been found to reduce HCs by 20-39%, CO by 12-19%, and NOx by 4-7%. (Attach. 1, pp. 15-16.) Exhaust emissions of all criteria pollutants could be reduced by requiring the use of at least 20% CARB-certified off-road engines in the mix of construction equipment operating on-site. (Attach. 1, pp. 17-19.) Further, effective post-combustion controls should be *required* on construction equipment, and not just recommended for evaluation as proposed in the DEIR. (DEIR, p. 4-18.) These controls have been widely used and can be imposed on construction equipment without the need for additional evaluation. (Attach. 1, pp. 19-22.) Finally, measures included in the CEQA guidelines of several air districts could further reduce construction-related emissions. (Attach. 1, pp. 22-26.) All of these measures are feasible, effective, and must be imposed to the extent that Project construction emissions remain significant.

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B. Air Quality Impacts From Operation Can Be Reduced

The DEIR concludes that “[o]peration emissions associated with the proposed project are expected to remain significant for VOC and NOx emissions....” (DEIR, p. 4-20.) As discussed above, actual emissions of these pollutants are substantially higher than claimed in the DEIR. The DEIR did not propose any mitigation for significant VOC and NOx emissions.

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In the case of VOCs, the DEIR asserts that most of these emissions arise from fugitive components, but since BACT is being required, nothing further can or need be required. (DEIR, p. 4-19.) In the case of NOx, the DEIR argues that most of these emissions arise from indirect sources and, since SCAQMD has no authority to regulate these emissions (according to the DEIR), nothing further can or need be done. (*Ibid.*) These positions are contrary to CEQA and standard practices.

1. Emissions Can Be Mitigated With Dissimilar Emissions

The DEIR appears to assume that emissions must be offset with reductions from the same source. (*See* DEIR, p. 4-19.) However, CEQA does not require that increase by mitigated with reductions from similar or identical equipment.

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There are numerous sources of VOC emissions at the Refinery (and nearby industrial areas) that could be controlled or retrofit to achieve sufficient VOC reductions to offset the Project's significant VOC emissions. These include tanks, pumps, compressors, valves, sumps, vents, and flanges. (Attach. 1, p. 38.)

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Similarly, there are numerous sources of NOx in the Refinery and at nearby sources that could be controlled or retrofit to achieve the required NOx emissions. For example, SCONOX, which removes over 90% of the NOx, CO, and VOCs, and 20% of PM10, could be installed on boilers and heaters. (Attach. 1, p. 38)

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In addition, VOCs and NOx are ozone precursors, and, therefore, contribute to a regional air quality problem. Emission reductions can be achieved at a distant source to mitigate this problem. A good example of this approach is the ARCO Clean Fuels Project, which retrofit a bus fleet in San Diego to mitigate significant impacts from its Carson refinery under CEQA. (Attach. 1, p. 38.)

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Finally, lead agencies can and often do present the Applicant with a laundry list of available mitigation measures, simply requiring that enough of the measures be implemented to reduce impacts below a level of significance. The Applicant can then voluntarily choose the most cost-effective and desirable measures to implement, whether or not the lead agency has the authority to *require* the Applicant to implement the measures. Therefore, the District can require the Applicant to adopt all feasible mitigation measures within the District's regulatory authority, or allow the Applicant to choose alternative voluntary measures that would be just as effective, as long as enforceable performance standards ensure that adequate mitigation will be achieved.

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2. Other Feasible Mitigation Measures

As explained above, CEQA requires that an agency impose all feasible mitigation measures to reduce an impact below a level of significance, or deny the project if feasible mitigation measures are rejected. The DEIR does not require all feasible mitigation measures to reduce the Project's emissions of NOx and VOCs.

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For example, in Los Angeles County alone, combustion sources emit 494 tons per day of NOx and 41 tons per year of VOCs. (Attach. 1, p. 39.) These emissions could be reduced by installing state-of-the-art pollution control technology on these

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sources. SCAQMD regulations require that most existing combustion sources meet a NOx limit of 30 ppm or higher and a CO limit of 100 ppm or higher. However, technically feasible and cost effective technology exists that can meet NOx limits of 1 to 2 ppm (SCONOx and SCR) and reduce VOCs up to 90% (SCONOx and oxidation catalysts) on heaters, boilers, furnaces, generators, and turbines. (Attach. 1, p. 39.) These and similar technologies have been proven on sources similar to the thousands of uncontrolled diesel generators in the South Coast (Attach. 1, p. 40), heaters and boilers (Attach. 1, pp. 40-41), and off-road mobile sources including marine engines (Attach. 1, pp. 42-43), and locomotives (Attach. 1, p. 44).

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The District should modify the DEIR to require these or similar mitigation measures and re-circulate the DEIR for public review and comment.

V. CONCLUSION

The DEIR fails to identify and adequately mitigate or avoid all potentially significant environmental effects of the Project. The District should modify the DEIR to (1) include the impacts of offsite ethanol blending, (2) correct the DEIR's assessment of significant air quality, water quality, public health, and worker safety impacts, (3) fully identify and impose enforceable mitigation measures, and (4) require all feasible mitigation for significant air quality impacts. The District should also re-circulate the modified DEIR for public review.

5-49

Please call us with any comments or questions.

Sincerely,

Katherine S. Poole

KSP:bh
Attachments

July 20, 2001

Katherine S. Poole
Adams Broadwell Joseph & Cardozo
651 Gateway Boulevard, Suite 900
South San Francisco, CA 94080

Re: Ultramar, Inc. Wilmington Refinery CARB Phase 3 Proposed
Project Draft Environmental Impact Report

Dear Ms. Poole:

As you requested, I have reviewed the Draft Environmental Impact Report ("DEIR") for the Ultramar Wilmington Refinery CARB Phase 3 Project ("project"). My detailed comments are attached.

In sum, the DEIR is poorly documented, incomplete, and underestimates impacts. The DEIR fails to identify and/or evaluate several significant impacts, including air quality, hazardous material, and water quality impacts. The DEIR did not disclose that PM10 emissions from project construction and PM10 and SOx emissions from project operation are both significant. Contaminated soils likely pose a significant hazard to construction workers. Further, ethanol leaks at off-site terminals could aggravate existing groundwater contamination. Finally, the DEIR fails to include sufficient mitigation measures to ensure that all such impacts are either avoided or reduced to less than significant levels. As a result, the DEIR should be revised and recirculated for public review.

Very truly yours,

J. Phyllis Fox, PhD, QEP

5-50

AIR QUALITY

I. CONSTRUCTION PM10 EMISSIONS ARE SIGNIFICANT

The project would be constructed over a 17-month period (DEIR, Fig. 2-8), from roughly the third quarter of 2001 through early 2003. (DEIR, p. 2-15.) The DEIR estimates that peak day PM10 emissions would be 127 pounds per day ("lb/day") from construction. (DEIR, Table 4-2.) The DEIR concluded that these emissions were not significant because they are less than the significance threshold of 150 lb/day. (DEIR, p. 4-7.) Thus, no mitigation was proposed for PM10 construction emissions. The fugitive dust emission control plan described in Mitigation Measure A-8 is included in the construction emission estimates in Table 4-2 and thus does not constitute mitigation. (DEIR, pp. 4-18/19.) However, as discussed below, the DEIR substantially underestimated PM10 emissions from construction. When the DEIR's errors are corrected, PM10 emissions increase from 127 lb/day to 1,811 lb/day,¹ requiring additional mitigation.

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I.A Comparison With MRI Study

The Midwest Research Institute ("MRI") conducted a study for the SCAQMD in 1996 to improve emission factors used to estimate PM10 emissions from construction activity. This study applied the same emission estimating procedures used by the DEIR, the unit operation approach, to seven typical construction projects in Las Vegas, Coachella Valley, South Coast, and the San Joaquin Valley. (MRI 1996.²) Each site was visited, inventoried, and limited monitoring conducted. The equipment inventories used in the MRI study (MRI 1996, Appx. B) are similar to the inventory proposed for this project. (DEIR, p. B-1.) The results of the MRI study indicates that the *average hourly* uncontrolled PM10 emissions are 229 pounds per hour, compared to *peak daily* uncontrolled PM10 emissions of 158 pounds per day³ estimated in the DEIR. Therefore, the DEIR has underestimated PM10 emissions by about a factor of 13. The causes of this rather severe underestimation are discussed below.

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¹ Revised PM10 emissions = 127 - 51 - 40 + 1,668 + 107 = 1,811 lb/day.

² Midwest Research Institute, Improvement of Specific Emission Factors (BACM Project No. 1), Final Report, Prepared for South Coast AQMD, March 29, 1996.

³ Uncontrolled peak daily emissions were estimated by adjusting Table 4-3 emissions using uncontrolled emissions from Appendix B, or 127 - 51 + 81.6 = 157.6 lb/day. The DEIR reported total uncontrolled peak day construction emissions of 64 lb/day, which is incorrect. The DEIR incorrectly estimated total uncontrolled fugitive construction emissions on page B-5. The peak day total of 64.006 lb/day sums lb/day values with ton/yr values. The correct value is given by 61.6 + 0.012 + 19.954 = 81.57 lb/day.

I.B Fugitive On-Site Construction Emissions Were Underestimated

The DEIR estimated peak day fugitive PM10 emissions of 51 lb/day under controlled conditions and 64 lb/day under uncontrolled conditions. (DEIR, p. B-5.) Fugitive construction emissions arise from topsoil removal, cutting and filling, and grading plus associated wind erosion and filling and dumping activities. The DEIR's estimate only includes fugitive emissions from one dozer "pushing" dirt around (61.6 lb/day), a backhoe excavating the pipeline trench (0.012 lb/day), and wind erosion from stockpiles (20.0 lb/hr). This is a tiny portion of the total fugitive construction emissions because it omits most of the sources of fugitive dust.

The DEIR's peak day estimate of grading emissions is based on a single dozer pushing dirt around. (DEIR, p. B-5.) However, elsewhere the DEIR indicates that on the peak day, the project would use two dozers, two compactors, two backhoes, ten dump trucks, and two loaders, a much more substantial operation than assumed in the emission calculations. (DEIR, pp. 4-4 and B-1/2.) Fugitive dust emissions would be generated by all of this equipment.

The DEIR relied on emission factors from the SCAQMD's CEQA Guidelines.⁴ (DEIR, pp. B-1/6.) The dozer emissions, for example, were estimated from Table A9-9-F. (DEIR, p. B-5.) The same source the DEIR relied on also reports emission factors for other construction activities, omitted by the DEIR but very clearly part of the project.

There are four primary activities that were omitted from the DEIR's calculations that are part of normal construction activities: (1) dumping of soils into trucks or piles; (2) topsoil removal; (3) cut and fill operations; and (4) dirt hauling. Additionally, substantial trenching would be required here to install the pipelines. This requires excavation, stockpiling of soil while pipe is laid, backfilling, and hauling off soils that cannot be returned to the trench. These operations are similar to conventional cut and fill operations.

The DEIR is clear that project construction will require excavation, temporary displacement and recompaction of soil, and about 11,000 cubic yards of grading. (DEIR, p. 4-23.) The emissions from each of these sources are estimated below using the same source relied on by the DEIR (SCAQMD 4/93, Table A9-9, pp. A9-92/93) and assuming that earthmoving would take place over

⁴ Although the DEIR claims that the trenching emissions (DEIR, p. B-5) were based on Table A9-9 from the SCAQMD CEQA Guidelines, I was unable to find any support for the extraordinarily small emission factor of 0.000012 pounds of PM10 per ton of dirt handled used for trenching.