UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 25, 2006

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Subject: Draft Environmental Impact Statement (DEIS) for the Long Beach Liquefied Natural Gas (LNG) Import Project, Los Angeles County, California (CEQ #20050428)

Dear Secretary Salas:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508) and Section 309 of the Clean Air Act. We appreciate your consideration of these comments after the close of the public comment period.

Based on our review of the document, we have rated the proposed project as Environmental Concerns - Insufficient Information (EC-2). A *Summary of EPA Rating Definitions* is enclosed. The DEIS projects a modeled exceedance of the National Ambient Air Quality Standard (NAAQS) for $PM_{2.5}$ from operational emissions in the South Coast Air Basin where the project would be located. The DEIS (p. 4-118) states that this modeled exceedance "would potentially worsen an existing violation" of this NAAQS even after implementation of all of the applicant's proposed control measures. We believe there are additional control measures that could be considered to mitigate the proposed project's impact on ambient concentrations of $PM_{2.5}$. Localized air emission impacts to surrounding communities and the safety risk evaluation of onsite storage of certain products are also of concern. We respectfully request additional information on proposed mitigation measures, potential hazardous substance release from demolition activities, storm water permitting requirements and impacts on impaired waters. Please see the enclosed Detailed Comments for a description of these concerns and our recommendations.

EPA recognizes the long-term environmental benefits that can be achieved in Southern California and the nation by increasing the supply and use of natural gas as a source of energy. We welcome the opportunity to meet with the Federal Energy Regulatory Commission (FERC) and the Port of Long Beach (POLB) to discuss possible ways to address the environmental impacts specific to this project. EPA appreciates the decision by the applicant to select a closed-loop vaporization system, in part, to address aquatic resource related issues associated with this

project. We also recognize the innovative approaches taken by the POLB to help achieve cleaner air. Through the Diesel Emissions Reduction Program of its Air Quality Improvement Plan, the POLB has introduced state-of-the-art emissions control technologies and alternative fueled vehicles to begin to address the significant contribution of port activities to air pollutant emissions in the South Coast basin. These and other programs implemented by the Port demonstrate its strong, continuing commitment to improve the existing environmental conditions of the adjacent community as well as the larger regional airshed.

We appreciate the opportunity to review and comment on this DEIS. Please contact me or Duane James, Manager of the Environmental Review Office, if you have questions or would like to discuss the issues we have raised. My number is (415) 972-3843 and Duane can be reached at (415) 972-3988. Also, when the Final EIS is released for public review, please send three copies to the address above (Mail Code: CED-2).

Sincerely,

/s/

Enrique Manzanilla, Director
Communities and Ecosystems Division

Enclosures:
Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: Robert Kanter, Ph.D., Port of Long Beach
Barry Wallerstein, D.Env., South Coast Air Quality Management District
Catherine Witherspoon, California Air Resources Board
Dean C. Simeroth, California Air Resources Board
Alan C. Lloyd, Ph.D., California Environmental Protection Agency
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Pat R. Perez, California Energy Commission
Steve Larson, California Public Utilities Commission
Jonathan Bishop, Los Angeles Regional Water Quality Control Board

EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR THE LONG BEACH LIQUEFIED NATURAL GAS (LNG) IMPORT PROJECT

Background

Sound Energy Solutions (SES) requests authorization from the Federal Energy Regulatory Commission (FERC) to construct, install, and operate a Liquefied Natural Gas (LNG) import terminal at the Port of Long Beach (POLB), Los Angeles County, California. The proposed facility would provide up to one billion standard cubic feet per day of natural gas to southern California, supply up to 150,000 gallons per day of LNG vehicle fuel, and provide storage of up to 320,000 cubic meters of imported LNG to reduce fluctuations in the local natural gas supply. The Federal action taken by FERC will be to issue an Order granting authority to site, construct, and operate the LNG terminal.

The proposed project includes an LNG ship berth and unloading facility, two LNG storage tanks, 20 electric-powered booster pumps, four vaporizers using a closed-loop water system, an LNG trailer truck loading facility, and a natural gas meter station and odorization system. The project will also include a 2.3-mile-long, 36-inch-diameter underground pipeline to transport natural gas from the LNG terminal to the existing local distribution system and a 4.6-mile-long, 10-inch-diameter underground pipeline to transport vaporized ethane from the LNG terminal to an existing refinery.

Air Resources

Air Quality in the South Coast Air Basin

The proposed project is located in the South Coast Air Basin (SCAB). The South Coast Air Quality Management District (SCAQMD) implements local air quality regulations in the SCAB to carry out Federal Clean Air Act (CAA) requirements, as authorized by the U.S. Environmental Protection Agency (EPA). The DEIS accurately reflects the SCAB nonattainment designations made by EPA for the National Ambient Air Quality Standards (NAAQS). The current SCAB nonattainment designations under the Federal CAA are as follows: carbon monoxide - serious nonattainment; 8-hour ozone - severe nonattainment; particulate matter with a diameter of 10 microns or less (PM_{10}) - serious nonattainment; and particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$) - nonattainment.

The SCAB $PM_{2.5}$ nonattainment designation was issued on January 5, 2005, and became effective April 5, 2005. For 2000 through 2002, the SCAB had the highest $PM_{2.5}$ annual mean concentration (29 micrograms per cubic meter or g/m^3) in the country, indicating that significant emissions reductions will be needed to attain the annual NAAQS for $PM_{2.5}$ of 15 g/m^3. In addition, data from 2000-2002 show that for the 24-hour $PM_{2.5}$ NAAQS,[1] South Coast

[1] On January 17, 2006, EPA published a Federal Register Notice on proposed revisions to the $PM_{2.5}$ NAAQS. The proposal includes lowering the existing level of the 24-hour standard from 65 g/m^3 to 35 g/m^3. The final rule is expected by September 27, 2006. The proposal is available at: http://www.epa.gov/fedrgstr/EPA-AIR/2006/January/Day-17/.

is one of two areas in the nation that are designated as nonattainment for this standard of 65 g/m^3. Although data from the North Long Beach Boulevard monitor that was chosen for analysis in the DEIS does not show violation of the 24-hour $PM_{2.5}$ NAAQS, data collected between 2000-2005 show that air quality measured by the North Long Beach Boulevard monitor has exceeded the 24-hour NAAQS level for this pollutant, on average, two days per year. For comparison, the average number of days that exceed the 24-hour NAAQS level per year in the SCAB ranges from 1-5 for 2000-2005. In addition, air quality measured by this monitor violates the annual $PM_{2.5}$ NAAQS of 15 g/m^3.

Operational Emissions from the Project

EPA agrees with the conclusion in the DEIS (page 4-118) that the predicted impact of operational emissions on ambient concentrations of $PM_{2.5}$ would be a significant effect of the proposed action. As discussed previously, the high ambient $PM_{2.5}$ concentrations in South Coast require major reductions to attain the $PM_{2.5}$ NAAQS. The modeled incremental contribution from the LNG project to the ambient concentration of $PM_{2.5}$ is 5.2 g/m^3 (24-hour average). These emissions could cause or contribute to projected future exceedances of the 24-hour $PM_{2.5}$ NAAQS (Table 4.9.5-4) in the project vicinity and could contribute to a new violation of the 24-hour $PM_{2.5}$ NAAQS. In addition, the predicted incremental contribution of 0.4 g/m^3 (annual average) could potentially worsen an existing violation of the annual $PM_{2.5}$ NAAQS in the project vicinity (Table 4.9.5-4).

Table 4.9.5-1 of the DEIS shows that the peak daily ship hotelling emissions of direct $PM_{2.5}$ are 64 pounds per day, accounting for approximately 63 percent of the project's total facility-based operations emissions in the project vicinity.[2] EPA acknowledges that the estimate of $PM_{2.5}$ emissions from ship hotelling may be conservative because $PM_{2.5}$ emissions have been assumed to be equal to PM_{10} emissions and direct $PM_{2.5}$ emissions appear to have been calculated using emissions assumptions based on residual fuel use rather than the cleaner fuels listed in the DEIS. However, EPA notes that chemical reactions of sulfur dioxide (SO_2), nitrogen oxides (NO_X), and volatile organic compounds (VOC) emitted from this source will also produce $PM_{2.5}$. This "secondary $PM_{2.5}$" would add to the total impact from the project on ambient concentrations in this nonattainment area. EPA also recognizes that ship hotelling emissions, including PM_{10} and $PM_{2.5}$, would be subject to SCAQMD offset requirements. The source, nature, and amount of such offsets that will be required for the SCAQMD permit have not yet been determined, but we note that such offsets, depending upon where they come from and other characteristics, may not diminish the local ambient concentration impact from this source.

[2] The percentage contribution of daily ship hotelling emissions was calculated from information in Table 4.9.5-1 in which facility-based operations emissions of $PM_{2.5}$ are listed as 37 lbs/day. Daily ship hotelling emissions (64 lbs/day) were added to these emissions to calculate the total contribution of facility-based operations emissions in the project vicinity (i.e., 101 lbs/day).

Regarding the cleaner fuels, the DEIS states that the ships hotelling at the POLB that do not use LNG boil-off gas would use "… fuels such as CARB's #2 diesel, gas-to-liquid diesel, biofuels, or a marine distillate fuel, in the ships' auxiliary power generator motors, or would use exhaust treatment technology (p. 4-116)." In addition, it is our understanding that CARB's governing board has adopted a regulation for auxiliary diesel engines and diesel electric engines operated on ocean-going vessels within California waters and 24 nautical miles of the California baseline.[3] To the extent that this rule is applicable to the project, it will require these engines to use marine gas oil or marine diesel oil with sulfur content no greater than 0.5 percent beginning January 1, 2007, and will require auxiliary engines to use marine gas oil with sulfur content no greater than 0.1 percent beginning January 1, 2010.

Recommendations:

Due to the large contribution of the ship hotelling emissions to the total facility-based operations emissions and the modeled impact on ambient concentrations of $PM_{2.5}$ resulting from operational emissions, EPA recommends that the FEIS evaluate the feasibility of additional mitigation measures (including offsets) to reduce the direct $PM_{2.5}$ emissions from ships hotelling at the POLB. Such mitigation measures could reduce the local ambient impact from ship hotelling emissions and may well also reduce the associated SCAQMD offset burden.

EPA recommends that FERC consider the use of marine gas oil with sulfur content at least as stringent as that required by the applicable fuel phase of the CARB rule for diesel engines, rather than the fuels proposed in the DEIS (for those LNG ships that will not be using boil-off LNG) while hotelling at the POLB. EPA also recommends that FERC consider the use of shore-side electrical power (i.e., cold-ironing) for LNG vessels hotelling at the Port to eliminate diesel engine emissions during hotelling. These measures should be evaluated in the FEIS and, if determined to be technically and economically feasible, included as commitments in the FERC Order authorizing the LNG terminal.

EPA also recommends that the FEIS evaluate the feasibility of utilizing natural gas as a fuel for all vessels that utilize the proposed SES terminal and, if determined to be technically and economically feasible, include these measures as commitments in the FERC Order authorizing the LNG terminal. The applicant for the proposed Cabrillo Deepwater Port project has committed to the use of natural gas, in lieu of diesel or bunker fuel, for all vessels in California waters, including supply and support vessels.

[3] Information on the rulemaking is available at: http://www.arb.ca.gov/regact/marine2005/marine2005.htm

Energy Content of Imported Natural Gas

The DEIS states that the imported natural gas will contain small amounts of heavier hydrocarbons (propane, ethane and butane). These may need to be removed from the LNG in order for the natural gas to meet the British Thermal Units (BTU) and gas quality specifications of Southern California Gas (SoCal Gas), as well as the specifications for LNG vehicle fuel established by the CARB (p. 2-9).

EPA notes that even though the imported gas may meet local specifications when distributed, the BTU content of that gas may still be greater than the BTU content of natural gas currently utilized throughout Southern California. Natural gas with a higher BTU content and/or higher Wobbe Index has the potential to increase NOx, carbon monoxide (CO) and unburned hydrocarbon emissions, as noted in SCAQMD's testimony to the Public Utilities Commission of the State of California.[4] A letter dated December 8, 2005 from SES to SCAQMD included the commitment to provide only natural gas that is within 2 percent of the current natural gas supply BTU content and/or Wobbe Index.[5]

Recommendation:
The FEIS should include a discussion of the current BTU content normally found in California's natural gas supply, SoCal Gas and CARB existing specifications, and current efforts to revise those specifications. It should discuss the potential impacts of increasing the BTU content of the gas supply, and address the applicant's commitment to provide a supply of natural gas within a specific quality range.

Construction Emissions from the Project

The DEIS addresses air emissions from construction activities and mitigation measures to reduce those impacts (Section 4.9.4). EPA supports the recommendations of FERC and POLB that contractors be required to use ultra-low sulfur (i.e., 15 parts per million by volume) or CARB-approved alternative diesel fuel in all diesel-powered equipment and that alternate-fuel buses be used to transport workers to and from the temporary laydown and worker parking area.

Recommendations:
EPA recommends that the FEIS include a *Construction Emissions Mitigation Plan (CEMP)* that incorporates, to the extent appropriate, additional measures including the following:

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[4] Responsive Testimony of the South Coast Air Quality Management District to Testimony and Proposal of San Diego Gas and Electric Company and Southern California Gas Company, Barry R. Wallerstein, D.Env., SCAQMD, September 23, 2005.

[5] Letter from Thomas E. Giles, SES, to Barry R Wallerstein, D.Env., SCAQMD, December 8, 2005.

- Use particulate traps, oxidation catalysts and other suitable[6] control devices on all construction equipment used at the construction site. Control technologies such as traps control approximately 80 percent of diesel particulate matter (DPM). Oxidation catalysts control approximately 20 percent of DPM, 40 percent of carbon monoxide emissions, and 50 percent of hydrocarbon emissions.
- Ensure that diesel-powered construction equipment is properly tuned and maintained to ensure they perform up to EPA certification levels and/or to ensure retrofit technologies perform up to verified standards. Shut off equipment when not in direct use.
- Prohibit engine tampering to increase horsepower.
- Locate diesel engines, motors, and equipment as far as possible from residential areas and sensitive receptors (schools, daycare centers, and hospitals).
- Lease or buy newer, cleaner equipment (1996 or newer model), using a minimum of 75 percent of the equipment's total horsepower.
- Work with the South Coast Air Quality Control District to implement the strongest suitable mitigation for reducing construction emissions, and include the above measures as part of the CEMP in the FERC Order authorizing the LNG terminal.

General Conformity

The General Conformity requirement of the CAA mandates that the Federal government not license, permit or approve any activity not conforming to an approved CAA implementation plan. The DEIS discusses General Conformity requirements (Section 4.9.6) and includes a Draft General Conformity Determination (Appendix E). EPA recognizes that the General Conformity determination for the LNG terminal facility has not yet been completed and that before the project can be approved by FERC, General Conformity will need to be demonstrated for CO and NOx from the project's construction emissions.

EPA anticipates taking final rulemaking action to amend the General Conformity rule to address $PM_{2.5}$, including the establishment of de minimis levels, by the end of the statutory grace period (April 5, 2006). Since the proposed action is located in a nonattainment area for $PM_{2.5}$, conformity must also be demonstrated for that pollutant after the end of the statutory grace period. If the de minimis level for $PM_{2.5}$ is set at 100 tons per year, no further action is required for this project with respect to General Conformity for direct $PM_{2.5}$ since the predicted construction and operational emissions of this pollutant are 67.6 and 15.2 tons per year, respectively (p. E-3, Volume II). In addition, applicability for General Conformity for all

[6] Suitability of control devices may be based on the following: whether there is reduced normal availability of construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine or whether there may be a significant risk to nearby workers or the public. The project sponsor may want to consider that such determination may be made in consultation with the control device manufacturer, equipment owner and the Air District.

precursors to secondary $PM_{2.5}$ must also be addressed.[7] However, if EPA's regulatory action is delayed and FERC prepares the conformity determination and takes its action after the grace period but before EPA finalizes revisions to the rule, we believe that the General Conformity rule will still apply (see 40 CFR 93.150(b)) and should be demonstrated by meeting the requirements of 93.158(a)(3).

Recommendations:
EPA supports the FERC staff recommendation that SES file documentation with FERC clearly demonstrating General Conformity so that the documentation can be reviewed and analyzed in the FEIS. All mitigation, offsets, controls, credits and/or other measures needed to achieve and maintain General Conformity for the project should be discussed in the FEIS and included as specific commitments in the FERC Order authorizing the LNG terminal. EPA will work with FERC to determine the appropriate method for meeting the General Conformity requirements, according to the relevant requirements at the time of the Federal action.

CAA Preconstruction Permitting Programs

The CAA contains two preconstruction permitting programs. The non-attainment New Source Review (non-attainment NSR) program applies to pollutants that exceed the NAAQS in an area. The SCAQMD has been approved by EPA to implement that program through their New Source Review regulations. The other program is the Prevention of Significant Deterioration Program. This program covers pollutants that do not violate the NAAQS, and is administered by the EPA in this area. These two programs are established in Parts C and D of Title I of the CAA.

Non-Attainment NSR Offsets. Emission offsets are required for the non-attainment NSR permit. The DEIS does not specify the offset requirements for the proposed facility, and it also does not identify what credits will be created or purchased. This information is important to show the expected mitigation and net air quality impact for the project.

Recommendations:
The FEIS should identify the operations with emissions that must be offset under Regulation XIII (NSR Requirements) and Regulation XX (Regional Clean Air Incentives Market), and should state the amount of offsets required. The FEIS should also identify the credits that have been or will be created and/or purchased to meet these requirements.

NSR Emission Rates. The DEIS lists several air pollution controls that would be used to comply with NSR Lowest Achievable Emissions Rates/Best Available Control Technology

[7] EPA's Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards, including a discussion of proposed precursors for secondary $PM_{2.5}$, may be found at: http://www.epa.gov/fedrgstr/EPA-AIR/2005/November/Day-01/a20455.htm.

(LAER/BACT) (p. 4-115). The document, however, does not describe how these technologies were selected as LAER/BACT.

Recommendation:
The FEIS should describe the process used to select the LAER/BACT. Alternatively, the FEIS should cross-reference the documents (i.e., the NSR permit application and SCAQMD analysis) that describe the information used to select these technologies.

Prevention of Significant Deterioration (PSD) Applicability. EPA is responsible for determining whether the PSD program would apply to this facility. We have been working with the applicant, and have recently received updated information to evaluate. We expect to complete our applicability determination in the near future.

Recommendation:
The FEIS should address whether PSD applies to this facility based on the determination EPA will supply to the applicant in the near future.

Clarification of Air Quality Area Designation

The DEIS states that both the Long Beach Import Project and the Cabrillo Deepwater Port would be located in air quality management districts that do not meet Federal air quality standards for certain criteria air pollutants (p. 3-17). EPA has made a preliminary determination[8] that the Cabrillo Port is located fourteen miles offshore of Ventura County in a Federally-designated unclassifiable/attainment area within the South Central Coast Air Basin, and that the rules of the Ventura County Air Pollution Control District apply at that location.

Recommendation:
The FEIS should clarify that EPA's preliminary determination regarding application of the Ventura District rules pertains only to the proposed Cabrillo Deepwater Port location, and does not necessarily apply to other proposed LNG projects, on or off-shore.

Impacts to Surrounding Communities

Analysis of Impacts

The DEIS indicates that the proposed project would result in impacts on air quality from several criteria air pollutants during operation, even after the implementation of control and mitigation measures. The DEIS also states that "the non Caucasian population in the study area census tracts constitutes about 64% of the total population. Therefore, the study area is considered a minority community based on its aggregate minority population" (p. 4-72). In

[8] Correspondence from Amy K. Zimpfer, USEPA Region 9, to Commander Mark Prescott, U.S. Coast Guard, Re: Proposed Cabrillo Port, November 3, 2005.

addition, the DEIS concludes that the proposed project would not result in disproportionately high and adverse health or environmental effects on minority and/or low-income communities (p. 4-76) because all populations within these areas would be affected equally.

Though the DEIS finds no adverse disproportionate impact, the methods to reach this conclusion are flawed in some areas. First, the census data for "non-Caucasian" only considers race and does not take into account ethnicity (Hispanic or Latino).

Second, on page 4-76, the DEIS concludes that the proposed project would not result in disproportionately high and adverse health or environmental effects on minority and/or low-income communities because minority and non-minority census tracts within this area would be affected equally. When a project has a potentially adverse impact, then an environmental justice analysis should compare impacts to an affected population or study area not with surrounding areas but, instead, with impacts to a reference population, such as Los Angeles County, the City of Long Beach, or alternative project sites. An environmental justice analysis should not compare two different sets of census tracts within the affected population.[9] Furthermore, the DEIS lists six different potential reference populations (Table 4.6.9-2), which is confusing.

Finally, on p. 4-75, the DEIS states that the proposed project would result in impacts on air quality from several criteria air pollutants, but it then cites a health risk assessment for air toxics showing human health risks are less than significant. This paragraph is confusing since these are not necessarily the same air pollutants.

Recommendations:

The aggregate minority population should be recalculated to consider both race and ethnicity. Detailed census data (Census 2000 Summary File 1 (SF 1)100-Percent Data) provides an aggregate measure in the "White alone" percentage under the category "Hispanic or Latino and Race." For example, in California, the percent "White alone" is 46.7%. Therefore, the aggregate measure for percent minority for California is 53.3%.

If, after further analysis and consideration of public input, this project is found to have a potential adverse impact, then an environmental justice analysis should clearly address whether the potential adverse impact to communities adjacent to the project area are likely to appreciably exceed the impacts on an appropriate reference population. The FEIS should select one, or at most two, reference areas and explain the rationale for selection. The FEIS should also quantify the magnitude of these impacts and discuss whether they are significant. EPA has developed a toolkit (see Footnote 9) to assist in the

[9] Toolkit for Assessing Allegations of Environmental Injustice, EPA Office of Enforcement and Compliance Assurance (OECA), November 2004, available at: http://www.epa.gov/compliance/resources/policies/ej/index.html.

evaluation of environmental justice impacts and cumulative risks and is available to help in this analysis.

Finally, for clarity, the FEIS should explain what localized health risks are associated with the impacts on air quality from criteria air pollutants. If the Health Risk Assessment cited included criteria air pollutants, such as PM, a short discussion of conclusions should be included here to avoid confusion.

In the evaluation of health risks, if not already done, the FEIS should consider sensitive receptors such as African American children, who are four times more likely to be hospitalized for asthma compared to white children.[10] Older low-income individuals might also be impacted by the proposed project.

Cumulative Impacts to Minority and Low-Income Populations

The DEIS provides a list of existing and proposed activities cumulatively affecting resources of concern in the project area (Table 4.12-1). The document identifies water resources, transportation, and air quality as the only three resources of concern. The DEIS also states that the incremental increase in the cancer risk level for toxic air pollutants as a result of the proposed project would likely contribute to an existing cumulative significant health impact in the SCAB. In contrast to potential effects from Criteria Air Pollutants, the DEIS acknowledges that the health impacts from air toxics could disproportionately affect the environmental justice communities located near the project area (p. 4-206).

In addition to the projects listed in Table 4.12-1, there are other past, present, and reasonably foreseeable future projects or actions that may contribute to cumulative impacts to potential environmental justice populations. Examples of possible sources of stress include the existing gas pipeline network, abandoned hazardous waste sites, power plants, refineries, mobile source emissions (including ships and trucks at the Port), rail-related emissions, and urban runoff.

Recommendations:
The FEIS should include an expanded evaluation of potential cumulative risks to minority and low-income populations affected, or potentially affected, by this project. Such an evaluation that considers past, current and future activities beyond those listed in Table 4.12-1 will provide a more complete picture of the total environmental and public health burden on communities surrounding the project area. We offer assistance to FERC in conducting further analyses of cumulative risk impacts.

EPA recommends that the feasibility of additional mitigation measures to reduce emissions be evaluated in the FEIS.

[10] Reference can be found at: http://www.epa.gov/region09/cross_pr/childhealth/asthma-california.html

The FEIS should discuss activities, initiatives (with implementation timelines and expected results) and proposed regulations by agencies and other organizations that are aimed at mitigating air emissions and toxic effects within the Los Angeles-Long Beach area. Such efforts include the POLB's Green Port policy, the Port of Los Angeles Green Terminal program and "no net increase" policy, the SCAQMD's Clean Port Initiative, ~~and~~ the public-private West Coast Diesel Emissions Reductions Collaborative and the State of California's Goods Movement Action Plan.[11]

Results of Public Outreach to Minority and Low-Income Populations

As stated in the DEIS, one of the purposes of Executive Order 12898 is to encourage the participation of minority and low-income populations in the NEPA process. The DEIS indicates that all affected landowners received notices about the project but did not make a distinction based on minority or income status. It also describes a large distribution list for the DEIS and two public workshops about this project. While the public outreach efforts are clearly described, the DEIS provides little information on action to specifically elicit participation of minority and low-income populations. Also, the DEIS does not address the success of those efforts and the level of meaningful involvement of the affected communities.

Recommendations:
The FEIS should document the public involvement methods used to communicate with potential environmental justice communities within the project area and provide an analysis of results achieved by reaching out to these populations. These methods might include one or more of the following: efforts made to reach the large affected Hispanic population, such as Spanish-language translations of public meetings and major documents, newsletters and summary meeting notes, outreach to tenants in addition to landowners, and/or holding meetings during the evening or weekends when more of the working public would be able to participate. Assessment of the project's impacts should reflect consultation with those populations affected. EPA has developed a model plan for public participation that may assist FERC in this effort.[12]

Safety Analysis

The DEIS discusses the safety analyses for the proposed project performed by both FERC and POLB (Section 4.11). Qualitative rather than quantitative information on release calculations and risk management/mitigation is used in the DEIS. This makes it difficult to determine if the release scenarios presented in the document adequately assess risks, especially considering the large population and neighboring facilities in the release footprints identified in the DEIS. As described in the text of the DEIS (Section 4.11.10 and Appendix F) and based on

[11] The Goods Movement Action Plan and associated documents are available at: http://www.arb.ca.gov/gmp/gmp.htm.

[12] The Model Plan for Public Participation, EPA OECA, February 2000, available at: http://www.epa.gov/compliance/resources/publications/ej/nejac_publications.html.

definitions of probability of occurrence used by Los Angeles County Fire Department, the DEIS excluded several release scenarios from the risk analysis. Exclusion based on probability of occurrence may not be prudent. Low-probability high-consequence scenarios should be evaluated to fully characterize the possible risk to the surrounding community. This includes the two scenarios in the Quest Hazard Analysis (Appendix F) that were not discussed in the FERC or POLB analyses (i.e., the earthquake-induced failure of an LNG storage tank and the terrorist-induced releases). Only after each scenario is fully evaluated should probability of occurrence be discussed. In addition, because a portion of the population within the hazard zone identified by FERC may not be able to evacuate or at least evacuate quickly enough to avoid injury, application of the NFPA-59A[13] standard may need to be supplemented by considering additional models to determine the effective impact zone within which serious injury and damage to property and the environment would occur.

Recommendations:
The FEIS should provide quantitative information on release calculations to allow the full examination of release factors evaluated by FERC. In addition, the FEIS should include an evaluation of all release scenarios described in Appendix F to fully characterize the risk that the proposed facility presents to surrounding populations. Finally, the FEIS should identify and evaluate additional protective measures to protect receptors in the hazard zone.

Identification of "Significant" Impacts and Mitigation

The DEIS establishes "significance criteria" for each environmental resource evaluated in Chapter 4 (Environmental Analysis). For many resources, the DEIS indicates that for the purpose of this analysis, an impact would be considered significant if the resource is impacted to a certain degree. For example, water resources would be significantly impacted if the project substantially degrades water quality or if a Federal or state water quality standard is violated (p. 4-20). Air quality would be significantly impacted if project emissions or cancer risk exceeded significance thresholds established in the SCAQMD California Environmental Quality Act (CEQA) Air Quality Handbook (p. 4-97).

It is not clear whether the DEIS proposes mitigation measures for impacts determined not to meet the significance criteria established for each resource (i.e., those determined to be "less than significant"). The DEIS indicates that, unless otherwise noted, all identified impacts are considered to be potentially significant adverse impacts before applying SES's proposed mitigation (p. 4-1). However, Table ES-1 (Summary of Significant Environmental Impacts and Agency-Recommended Mitigation Measures) only lists impacts for three resource areas (i.e., transportation, air quality, and reliability and safety). Although it may be appropriate under CEQA not to propose mitigation for specific impacts that do not meet the significance threshold, this approach is inconsistent with long-established federal guidance from the President's Council

[13] NFPA-59A, National Fire Protection Association Standard for the Production, Storage, and Handling of Liquefied Natural Gas

on Environmental Quality (CEQ) implementing its NEPA regulations. As CEQ has explained, "mitigation measures must be considered even for impacts that by themselves would not be considered 'significant'." (CEQ's 40 Questions,[14] #19a).

Recommendations:
The FEIS should clarify the distinction between NEPA and CEQA requirements regarding the need to discuss mitigation measures for environmental impacts. If, for any resource, the DEIS only discussed mitigation measures for significant impacts under CEQA, the FEIS should also discuss mitigation for potential impacts that are not, by themselves, considered significant, as outlined in the CEQ guidance referenced above. The FEIS should also clarify the apparent inconsistency between the limited number of significant adverse impacts displayed in Table ES-1 and the statement that all impacts are considered potentially significant adverse impacts.

Hazardous Substances and Toxic Materials

The DEIS indicates that the POLB intends to demolish two abandoned Navy buildings and remove pavement at the project site in order to accommodate the proposed LNG facility (p. 2-5). However, there is no discussion or analysis of hazardous materials potentially associated with the two buildings nor a discussion or analysis of hazardous substances contamination in this area of the project. The document states that these impacts were previously addressed in the Navy's EIS for disposal and reuse of the Long Beach Naval Complex.[15] The DEIS does not address potential hazardous substances or toxic materials that may be present at these two abandoned buildings including lead-based paint (LBP), asbestos-containing materials (ACM) and/or polychlorinated biphenyls (PCB). Nor does the DEIS address whether soil and/or groundwater contamination, as well as storm water runoff contamination, could be issues of concern from historic defense-related activities at the site.

Recommendation:
The FEIS should address the degree of toxic materials at the two buildings proposed for demolition as well as any hazardous substances contamination (soils and/or groundwater) at the project site. The FEIS should address appropriate mitigation and regulatory compliance requirements (e.g., requirements governing disturbance and disposal of ACM, PCB, and LBP, including occupational health and safety rules; and rules regarding remediation and/or disposal of contaminated soil such as soil contaminated by hydrocarbons, lead-based paint, etc.). The FERC Order authorizing the LNG terminal should include appropriate commitments regarding mitigation and/or monitoring of storm water runoff, hazardous substances and toxic materials in the project area, including a

[14] Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 40 CFR Parts 1500-1508, Federal Register, Vol. 46, No. 55, March 23, 1981.

[15] Final Environmental Impact Statement/Environmental Impact Report for the Disposal and Reuse of Long Beach Complex, Department of the Navy and City of Long Beach, April 1998.

brief discussion of the Navy's role in identifying and remediating hazardous substances and toxic materials at their former facility.

Water Resources

National Pollutant Discharge Elimination System (NPDES) Permitting Requirements

The DEIS states that the project would require NPDES permits for construction storm water runoff and hydrostatic test water discharges (p. 4-30). The document also indicates the specific general permits which could provide permit coverage. However, the DEIS is unclear regarding permitting of post-construction storm water discharges. NPDES regulations at 40 CFR 122.26(b)(14)(viii) require storm water permits for transportation related facilities with vehicle maintenance or equipment cleaning operations. The LNG terminal may need a permit for post-construction storm water discharges as a transportation facility (SIC code 4491, marine cargo handling) with vehicle maintenance or equipment cleaning operations.

Recommendations:
The FEIS should clarify any post-construction storm water permit requirements for the facility. The document should also discuss the State's general storm water permit for industrial facilities (general permit No. CAS000001) as a possible means for obtaining permit coverage.

The DEIS states that best management practices would be designed or implemented to minimize the discharge of pollutants in storm water *or non-storm water* flows from the LNG terminal site (p. 4-31). The nature of the non-storm water flows is not described, and the only discharges which are specifically identified are storm water runoff and hydrostatic test water.

Recommendations:
The FEIS should identify any non-storm water flows and all other potential discharges from the facility site, and specify the permitting mechanism for each discharge.

Clean Water Act (CWA) Section 303(d) Impaired Waters

The CWA requires states to develop a list of impaired waters that do not meet water quality standards, establish priority rankings, and develop Total Maximum Daily Loads (TMDLs). The State of California's 2002 CWA Section 303(d) List of Water Quality Limited Segments[16] indicates that Long Beach Harbor is an impaired water body. Impairments listed are benthic community effects, dichlorodiphenyltrichloroethane (DDT), polycyclic aromatic hydrocarbons (PAH), PCB, and sediment toxicity.

[16] California's 2002 Section 303(d) List can be found at: http://www.swrcb.ca.gov/tmdl/303d_lists.html.

The DEIS does not discuss CWA Section 303(d) listings in the project area, pollutants of concern, whether TMDLs have been established for those water bodies, or the impact the proposed project might have on meeting California's CWA Section 303 goals.

Recommendations:
The FEIS should provide information about all CWA Section 303(d) impaired waters in the project area and efforts to develop and/or revise TMDLs. It should describe existing restoration and enhancement efforts for those waters, how the proposed project will coordinate with ongoing protection efforts, and any mitigation measures that will be implemented in order to avoid further degradation of impaired waters. The FEIS should also provide a description of the CWA 303(d) program.

SUMMARY OF EPA RATING DEFINITIONS [1]

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACTS OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impact that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

[1] From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.