STATE OF CALIFORNIA ARNOLD SCHWARZENEGGER, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

December 8, 2005

Ms. Magalie Roman Salas
Office of the Secretary
Docket Room
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A, East
Washington, D.C. 20002
(cc: to **Gas Branch 1, DG2E)**

Robert Kanter, Ph.D.
Port of Long Beach Planning Division
925 Harbor Plaza
Long Beach, CA 90802

RE: Sound Energy Solutions, FERC Docket Nos. CP04-58-000, et al.
Long Beach LNG Import Project, POLB Application No. HDP 03-079
Draft Environmental Impact Statement/Environmental Impact Report

Dear Ms. Salas and Dr. Kanter:

Enclosed for electronic filing with the Federal Energy Regulatory Commission (FERC) and hard copy filing with the Port of Long Beach (POLB) in the above-referenced matters, please find the **Comments of the Public Utilities Commission of the State of California re: Long Beach LNG Import Project Draft Environmental Impact Statement/Environmental Impact Report and Draft Port Master Plan Amendments No. 20 [Revised].** After the Public Utilities Commission of the State of California (CPUC) already filed its comments with supporting testimony, declarations and exhibits earlier today, the CPUC became aware of an inadvertent mistake on page 42 of the comments. Accordingly, we are enclosing for filing these revised comments with the mistake corrected. There was no need to correct anything in the testimony, declarations and exhibits, which the CPUC previously filed.

Thank you for your cooperation in this matter.

Sincerely,

/s/ HARVEY Y. MORRIS

Harvey Y. Morris
Assistant General Counsel
(415) 703-1086
hym@cpuc.ca.gov

cc: Honorable James C. Hankla
Honorable Dr. Mike Walter
Honorable Doris Topsy-Elvord
Honorable Mario Cordero
Honorable John W. Hancock

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Sound Energy Solutions	Docket Nos. CP04-58-000, *et al.* POLB App. No. HDP 03-079

COMMENTS OF THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA RE: LONG BEACH LNG IMPORT PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT AND DRAFT PORT MASTER PLAN AMENDMENT NO. 20 [REVISED]

RANDY L. WU
HARVEY Y. MORRIS
MICHAEL EDSON
PAUL ANGELOPULO

Attorneys for the Public Utilities
Commission of the State of California

505 Van Ness Avenue, Room 5138
San Francisco, CA 94102
Phone: (415) 703-1086

December 8, 2005

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Pursuant to the Federal Energy Regulatory Commission's (FERC) and Port of Long Beach's (POLB) October 7, 2005 notice herein, the Public Utilities Commission of the State of California (CPUC) hereby submits these comments regarding the Long Beach LNG Import Project Draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR) and the Draft Port Master Plan Amendment No. 20. In support of the CPUC's comments, the CPUC is contemporaneously filing the following documents: the Prepared Supplemental Testimony of Dr. Jerry Havens (Havens Supp.) (Exhibit PUC-5) and Accompanying Exhibits (Exhibits PUC-6 through PUC-10); Declaration of Harvey Y. Morris (Morris Declaration) and Accompanying Exhibit PUC-11 RE: Expansion of Southern California Gas Company's Intrastate Pipeline Facilities (Exhibit PUC-11); Declaration of Paul Angelopulo (Angelopulo Declaration) and Accompanying Exhibit PUC-12 RE: September 14, 2005 LNG Fuel Truck Fire in Fernley, Nevada (Exhibit PUC-12)**;** Prepared Direct Testimony of Wendy Maria Phelps (Phelps Testimony) (Exhibit PUC-13) and Accompanying Exhibits (Exhibits PUC-14 through PUC-16); and the Prepared Direct Testimony of David R. Effross (Effross Testimony) (Exhibit PUC-17) and Accompanying Exhibits (Exhibit PUC-18 through PUC-19).

The CPUC's comments also rely upon the following documents, which were already filed with the FERC and are contemporaneously being submitted to the Port of Long Beach: the Affidavit of Wendy Maria Phelps (Phelps Affidavit) (dated February 23, 2004 and filed as Attachment B to the CPUC's Notice of Intervention and Protest); Supplemental Affidavit of Wendy Maria Phelps (Phelps Supp.) (dated April 22, 2004 and Exhibits A through D attached thereto); Prepared Direct Testimony of Dr. Jerry Havens (Havens Testimony) (Exhibit PUC-1) And Accompanying Exhibits (Exhibits PUC-2 through PUC-4) (filed with FERC on October 4, 2005); and the California Energy Commission's (CEC) Safety Advisory Report On the Proposed

Sound Energy Solutions Liquefied Natural Gas Terminal at the Port of Long Beach, California (State's Safety Advisory Report) (filed with FERC on September 7, 2005).

INTRODUCTION AND EXECUTIVE SUMMARY

The CPUC recognizes the need for Liquefied Natural Gas (LNG) import terminals along the West Coast, including the coast of the State of California, because additional supplies of natural gas are needed to help meet natural gas demand and put downward pressure on the prices of natural gas. An LNG import terminal can provide 1 Bcf/d of natural gas, which can meet almost 16% of the average daily need for natural gas in the entire State of California. (DEIS/EIR at 1-4). However, LNG is hazardous, and the enormous volume of LNG at an import terminal could make the potential consequences of a spill of LNG (e.g., fires resulting in fatalities and burns) very widespread. Therefore, where as here, there is a choice between an LNG import terminal in a densely populated area or a remote onshore or offshore location, common sense, and the law, would require that the LNG import terminal be sited in the more remote location.[1]

Sound Energy Solutions' (SES) proposed LNG import terminal at the Port of Long Beach would be in a densely populated, urban area, and would pose a risk to the health and safety of the approximately 130,000 people living, working or visiting in the area within approximately three miles of the proposed site. There are more than 85,000 people living within three miles of the

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1 The CPUC's comments focus on areas within its expertise concerning natural gas facilities, including the safety of LNG facilities. The CPUC has authority under state law over the safety of natural gas facilities in the State of California. *See San Diego Gas & Elec. Co. v. Sup. Ct.*,13 Cal. 4th 893, 923-25 (1996). The CPUC is also certificated by the United States Department of Transportation (DOT) to enforce natural gas pipeline safety standards. *See* Natural Gas Pipeline Safety Act (NGPSA), 49 U.S.C. §§ 60104(c), 60105. The CPUC's Utilities Safety Branch has 18 safety engineers, who inspect natural gas and electric facilities in California, including safety engineers with LNG safety training. The CPUC has regulated LNG facilities in the past (i.e., a utility's peaking LNG facility through 1985), had certificate hearings in the 1970s on LNG import terminal facilities at Point Conception, and currently has pending proceedings involving LNG-related issues which impact CPUC-regulated intrastate pipelines. The CPUC was one of the substantial contributors to the State's Safety Advisory Report.

proposed site, with residential neighborhoods as close as 1.3 miles away in the City of Long Beach and two miles away in the City of Los Angeles. There are also approximately 44,000 people who work within three miles of the proposed site, including approximately 2,000 daily workers at the Port of Long Beach within one mile of the proposed site. Numerous tourist attractions, such as the aquarium, and parks and recreational activities are as close as 1.5 miles away, and downtown Long Beach itself is just two miles away. Phelps Affidavit at 3-5; State's Safety Advisory Report at 6-8. There are pending proposals for LNG import terminals more than 10 miles offshore, which do not pose such risks to the general public onshore. Havens Testimony at 16-17. Consequently, under the applicable federal and state statutes, which center on protecting the safety of the general public and the environment (discussed below), SES's proposed project should be rejected.

LNG and natural gas liquid hydrocarbons (NGLs) extracted from LNG (e.g., ethane, propane, butane) are hazardous materials. For example, in 1944, there was an accident in Cleveland, where LNG spilled from storage tanks, formed into vapor clouds that spread over one quarter square mile, ignited, and resulted in fires and explosions that killed 130 people and injured 225 people. Phelps Supp. Affidavit at 4-6 & Exhibit C, attached thereto. More recently, on January 19, 2004, there was an accident caused by a vapor cloud (from a leak of LNG or one of the NGLs), which ignited at the LNG export facility in Algeria, where 27 people were killed and 56 people were injured from the resulting explosion or fires. Phelps Supp. at 6 & Exhibit D, attached thereto.

In the present case, SES has proposed to site and construct an LNG import terminal at the Port of Long Beach, California. Like the LNG site, which was in the Cleveland accident, SES's proposed LNG facilities would be in a densely populated metropolitan area. Unlike the City of Cleveland's LNG storage facility, SES's proposed LNG import terminal would store and

regularly receive deliveries of enormous volumes of LNG. The amount of LNG which spilled in Cleveland in 1944 was 6,300 cubic meters. Under SES's proposal, the amount of LNG which would be stored in two storage containers at the Port of Long Beach would be 320,000 cubic meters, DEIS/EIR at 2-1, more than 50 times what spilled in Cleveland. Phelps Supp. at 5. Moreover, up to 120 LNG tankers would regularly deliver at least 125,000 cubic meters of LNG per shipment to SES's proposed LNG import terminal each year (approximately twice every week). DEIS/EIR at 2-5. Each shipment would be more than 20 times the amount which spilled in Cleveland.

Like the LNG export facility in the Algeria accident, SES's proposed LNG import terminal would process the LNG on site and therefore extract NGLs in its facilities. DEIS/EIR at 2-9. Therefore, the LNG would contain significant amounts of NGLs, such as ethane, propane and butane. After extracting the NGLs, they would at least temporarily still be on the premises. This adds to the risk of fires and explosions. Havens Supp. at 23.

To be sure, the technology has greatly improved since 1944 and SES's proposed LNG import terminal would have many additional safeguards, which did not exist at the City of Cleveland, and some additional safeguards, which did not exist at the LNG export facility in Algeria. Therefore, the particular causes of those accidents would not be duplicated at SES's proposed site. However, underlying each of those accidents was human error. Notwithstanding the advancements in science and technology, human error is still a possible cause of an accident at an LNG import terminal or elsewhere. Havens Supp. at 24-26. Indeed, on September 14, 2005, due to human error, a 10,000-gallon LNG tanker truck leaked LNG at Fernley, Nevada. After the LNG vapor ignited into an intense fire, people within a mile were evacuated, and the responding fire departments were moved back several times, finally staging approximately one mile from the scene. Exhibit PUC-12 at 7-8 (5-6 on bottom of pages), accompanying Angelopulo Declaration.

By way of comparison, just a 10-minute spill from a ship unloading line at SES's proposed LNG import terminal could cause a spill of 550,310 gallons of LNG (DEIS/EIR 4-138), which is more than 55 times the entire content of the LNG tanker truck in the Fernley, Nevada fire.

Moreover, the proposed LNG import terminal at the Port of Long Beach faces two additional potential causes of LNG spills, which were not factors in the Cleveland or Algeria accidents. As made clear on 9/11, the United States is the target of terrorism and an LNG spill could be caused by an intentional, malevolent act, rather than an accident. The other potential cause is an earthquake. As SES admits, there are 27 active earthquake faults within approximately 100 miles of the proposed site, which is on landfill. SES Resource Report No. 6, at 8-11

Fortunately, technology has also advanced such that LNG import terminals are now possible offshore, many miles away from the population onshore. Thus, rather than even take the risk of an accident at the Port of Long Beach or any other city in California, the general public can be protected by much safer alternatives in federal offshore waters, including two projects that are already proposed more than 10 miles offshore from Oxnard, California: BHP Billiton's proposed LNG import terminal, which is more than 14 miles offshore in federal waters, and Crystal Energy's proposed LNG import terminal, which is 10.5 miles offshore. Havens Testimony at 16-17. Other offshore projects are possible and can be considered.

The DEIS/EIR, however, does not look at the big picture, and attempts to downplay the hazards and environmental effects, as part of its justification for approving SES's proposed LNG import terminal at the Port of Long Beach. The DEIS/EIR starts with an inadequate description of the project, which is, in part, the result of deliberate conduct by SES to withhold from the

public and the government information about the facilities.[2] The DEIS/EIR significantly underestimates the distances at which people could receive second-degree burns or worse from an LNG pool fire, by relying upon the NFPA 59A thermal radiation flux standards. These standards do not protect all of the general public from such injuries, and they have been defended by the industry based upon the assumption that people will know what to do and are capable of running 100 meters away from the heat of the fire within 30 seconds. Havens Supp. at 10-11.

The DEIS/EIR erroneously finds, that SES's proposed LNG project would confine LNG spills to the proposed LNG site and meet the minimum LNG siting safety standards for vapor dispersion exclusion zones, by relying upon the DEGADIS model, but fails to consider: (1) empirical tests which already disproved FERC's and SES's theoretical assertions; (2) LNG spills mix with air when they warm up and this results in larger volumes; and (3) Dr. Jerry Havens, the CPUC's expert witness, is the creator of the DEGADIS model and has testified that FERC staff has not properly used his model. Havens Supp. at 18-22.

The DEIS/EIR, Appendix F at 6-8 also recognizes that in the worst-case scenario a flammable vapor cloud could spread more than six miles away. However, the DEIS/EIR never considers all of the scenarios under which a flammable vapor cloud could spread and ignite somewhere between the site and six miles away from the site. DEIS/EIR, Appendix F at 1-4.

The DEIS/EIR has also been issued prematurely without even addressing numerous issues raised in the State's Safety Advisory Report, notwithstanding new requirements under federal law, which mandate that the issues must be addressed prior to authorization of a project.

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[2] The DEIS/EIR at 3-6 assumed that Southern California Gas Company (SoCalGas) is already capable of receiving up to 1 Bcf/d from SES, and, therefore, did not address the necessary expansion of SoCalGas' intrastate pipeline system and any environmental impacts associated with SoCalGas' expansion. This is because SES's environmental consultant had advised SES against "public disclosure" of the expansion of SoCalGas' facilities until "after the Harbor Development Permit (HDP) is issued." Exhibit PUC-11 at 8, accompanying Morris Declaration.

The DEIS/EIR also fails to adequately discuss the safer alternatives to SES's proposed LNG project, which clearly can meet most, if not all, of the objectives of the project.

Fundamentally, the DEIS/EIR is deficient for failing to address many of the impacts of the proposed project, and for not providing an adequate analysis of safer alternatives. It therefore deprives the decisionmakers of the ability to make informed and reasoned decisions and it deprives the public of the information they need to meaningfully participate in the process.

As a purely state law matter,[3] the Long Beach Board of Harbor Commissioners should reject the Draft Port Master Plan Amendment No. 20, because it would violate the California Coastal Act, Cal. Pub. Res. Code §§ 30000*, et seq.*, by leasing property to be used for the proposed LNG import terminal, which, in light of its widespread impacts, should be further away from areas where people live, work or visit recreational areas and from an area with numerous geologic hazards. The Draft Port Master Plan Amendment No. 20 would also violate the California Coastal Act, because it would not provide sufficient protection against the spillage of LNG and/or effective containment and cleanup facilities and procedures for accidental spills that do occur. The Draft Port Master Plan Amendment No. 20 would further violate the Risk Management Plan of the Port Master Plan for the Port of Long Beach, because the proposed LNG import terminal would have significant and adverse impacts upon residential, recreational, and visitor populations, and high-density Port working populations, critical regional facilities and high value facilities at or near the Port of Long Beach.

[3] By raising state law issues in these comments, the CPUC does not waive any rights to challenge the FERC's attempt to rule upon the state law matters. These comments are being provided to both the Board of Harbor Commissioners of the Port of Long Beach (Board) and the FERC, based upon instructions given by a joint notice, but the state law issues are being provided here *only* for the Board to consider in its rulings as to whether or not to certify the EIR or approve the Draft Port Master Plan Amendment Number 20. The CPUC and State of California reserve all rights under the 1st Amendment, 10th Amendment and 11th Amendment of the United States Constitution by filing these comments on state law issues only for the Board's consideration.

STATEMENT OF ISSUES

1. The DEIS/EIR provides an inadequate description of the project and fails to consider connected actions, because it does not address necessary expansion facilities, which would be required on SoCalGas' pipeline system, or describe the volume of propane extracted onsite and facilities to store or transport the propane. It also does not address the environmental impacts associated with the SoCalGas expansion or the propane. Therefore, the DEIS/EIR is incomplete and should be redrafted and recirculated for comment. California Environmental Quality Act (CEQA), Cal. Pub. Res. Code § 21000 et seq.; *County of Inyo v. City of Los Angeles*, 71 Cal. App. 3d 185, 193 (1977); *Laurel Heights Improvement Ass'n v. Regents of the Univ. of Calif*., 47 Cal. 3d 376, 396-97 (1988); National Environmental Policy Act (NEPA), 42 U.S.C.A. § 4321 et seq.; 40 C.F.R. § 1508.25(a); *Town of Huntington v. Marsh*, 859 F.2d 1134, 1142 (2nd Cir. 1989); *Save the Yaak Committee v. Block*, 840 F.2d 714, 719-20 (9th Cir. 1988).
2. The CPUC's pending motion (filed on October 4, 2005) for an evidentiary, oral hearing should be granted, because there is a dispute of material facts on the safety of the proposed LNG import terminal and there are issues involving SES's credibility. *See Public Service Co. of New Hampshire v. FERC*, 600 F.2d 944, 955 (D.C. Cir. 1979); Section 311(c)(2) of the Energy Policy Act of 2005 (EPAct of 2005) (as codified in section 3(e)(2) of the Natural Gas Act, 15 U.S.C. §§ 717b(e)(2)); 18 CFR § 380.10. The CPUC disputes and has tendered evidence contrary to the following claims in the DEIS/EIR that: SoCalGas' interstate pipeline can already receive up to 1 Bcf/d of natural gas from SES; there would not be a significant amount of propane at the site; there would not be potential

impacts outside of the site's property or outside of the Port of Long Beach; the potential thermal flux impacts from a pool fire would not affect people outside of the Port; the flammable vapor clouds from accidental spills would stay on the property of the LNG site; there is no possibility of the LNG resulting in a Boiling Liquid Expanding Vapor Explosion (BLEVE); LNG tanker trucks are safe; there is no credible possibility of a successful terrorist attack; there is no credible possibility of an accident; there is no credible possibility of an earthquake causing a release of LNG; and/or there are not safer alternatives which can meet the objectives or most of the objectives of SES's proposed LNG facilities.

3. Section 311(d) of the EPAct of 2005 (as codified in section 3A(b)&(c) of the Natural Gas Act, 15 U.S.C. §§ 717bA(b)&(c)) has explicitly provided that before the FERC can issue an order authorizing an LNG import terminal, the FERC must review and respond specifically to issues raised by a State's Safety Advisory Report. The FERC staff erred in issuing the DEIS/EIR without first responding to the State's issues in that Report, and by not following the siting standards by taking into account the densely populated area and the need to encourage remote siting.
4. The DEIS/EIR violates requirements under CEQA and NEPA, because it fails to address potential impacts and mitigation measures. *Laurel Heights Improvement Assn. v. Regents of University of Calif.*, 47 Cal.3d 376, 391-392 (1988); 14 Cal. Code Regs. § 15126.2; 14 Cal. Code Regs. § 15126.4; *Save the Yaak Committee v. Block*, 840 F.2d 714, 717 (9th Cir. 1988). *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989). The DEIS/EIR did not address the following potential impacts: the potential thermal flux impacts under 1600 Btu/hr/ft^2, which

could harm people as a result of a pool fire; data from DOT's Falcon tests establishing that flammable vapor clouds from accidental spills would not increase in volume and be contained on the property; the impacts from a flammable vapor cloud or pool fire from a 550,310-gallon spill from a marine transfer line; flash fires from flammable vapor clouds under various scenarios which can spread over distances from the site and less than 6 miles away from the site; the impacts on the people and the infrastructure from a Boiling Liquid Expanding Vapor Explosion (BLEVE); recent data establishing that LNG tanker trucks are not safe; combined impacts from a fire from an LNG spill spreading due to flammable hazardous materials and possibly toxic materials in the Port of Long Beach; the impacts from an LNG spill as result of human error, including human error in combination with an earthquake or terrorist attack; and the devastating economic impact which could occur from a LNG spill and fire on the infrastructure in the Port of Long Beach.

5. The DEIS/EIR erroneously deferred consideration of mitigation measures in terms of an evacuation plan, measures to mitigate seismic problems, and measures to protect against terrorist attacks. This deferral of the discussion of mitigation measures is contrary to CEQA. *See Endangered Habitats League, Inc v. County of Orange*, 131 Cal. App. 4th 777, 793-94 (2005).
6. The DEIS/EIR does not comply with CEQA or NEPA, because it fails to adequately consider safer alternatives, such as offshore LNG import terminals or more remote LNG import terminals, which can meet all or most of the project's objectives. The DEIS/EIR also failed to consider alternative means to provide LNG for vehicle fuel or other less polluting vehicle fuels. Therefore, SES's

proposed LNG import terminal should not be approved. Cal. Pub.Res. Code § 21002; 14 Cal. Code Regs. §§ 15092, 15126.4(a); 15126.6(a); See *also Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 352 (1989).

7. The Draft Port Master Plan Amendment No. 20 would violate the California Coastal Act, Cal. Pub. Res. Code §§ 30000, *et seq.*, because the location of the proposed LNG import terminal should be further away from areas where: the general public may work or live (see Cal. Pub. Res. Code § 30250(b)); there are geologic hazards (see Cal. Pub. Res. Code § 30253(a)); and there are popular visitor destination points for recreational uses. See Cal. Pub. Res. Code § 30253(d)). Overall, a new hazardous facility should not be sited where it would be adverse to the public welfare. See Cal. Pub. Res. Code § 30260(d)).

8. The Draft Port Master Plan Amendment No. 20 would also violate the California Coastal Act, Cal. Pub. Res. Code § 30232, by not providing sufficient protection against the spillage of LNG in relation to the volume used at various parts of the LNG terminal or transportation of LNG, and by not providing effective containment and cleanup facilities and procedures for accidental spills that do occur.

9. The Draft Port Master Plan Amendment No. 20 would also violate the Risk Management Plan of the Port Master Plan for the Port of Long Beach, because the proposed LNG import terminal would have significant and adverse impacts upon the "vulnerable resources," defined as residential, recreational, and visitor populations, and high-density Port working populations, critical regional facilities and high value facilities at the Port of Long Beach and within at least a three-mile radius around the proposed site, including residential and commercial

neighborhoods and recreational areas in the City of Long Beach and the City of Los Angeles.

ARGUMENT

I. The DEIS/EIR Provides an Inadequate Description of the Project, and Fails to Consider Connected Actions

Under the California Environmental Quality Act (CEQA), Cal. Pub. Res. Code § 21000 et seq., an EIR must contain "an accurate, stable and definite project description." *County of Inyo v. City of Los Angeles*, 71 Cal. App. 3d 185, 193 (1977). It must analyze all foreseeable phases of the proposed project. *Laurel Heights Improvement Ass'n v. Regetns of the Univ. of Calif.*, 47 Cal. 3d 376, 396-97 (1988). The National Environmental Policy Act (NEPA), 42 U.S.C.A. § 4321 et seq., contains similar provisions, requiring agencies to review not only the direct and indirect impacts of the proposed action and alternatives, but also the impacts of any connected actions. 40 C.F.R. § 1508.25(a). Connected actions are actions that are closely related to the proposed action, and include actions that are interdependent parts of a larger action, and which depend on the larger action for their justification. 40 C.F.R. § 1508.25(a)(1). Where a proposed action lacks "independent utility" apart from another action, the two actions are "connected actions" that must be evaluated in a single EIS. *Town of Huntington v. Marsh*, 859 F.2d 1134, 1142 (2nd Cir. 1989). Independent utility exists only where the proposed activity might reasonably occur in the absence of the related activity. *See, e.g., Save the Yaak Committee v. Block*, 840 F.2d 714, 719-20 (9th Cir. 1988).

A. SES has deliberately concealed from its project description related expansion facilities to SoCalGas' intrastate pipeline

The primary objective of SES's proposed LNG import terminal is to provide up to 1 Bcf/d of natural gas to Southern California. DEIS/EIR at 1-2. The natural gas from SES's proposed LNG import terminal would be transported through SES's 2.3 mile pipeline into

SoCalGas' intrastate pipeline system. DEIS/EIR at ES-3, 1-1. The DEIS/EIR says nothing about changes necessary for SoCalGas' facilities to receive and transport this new supply of natural gas, or any environmental impacts associated with such changes. Instead, the DEIS/EIR erroneously states that SoCalGas is already capable of receiving up to 1 Bcf/d from SES, and contrasts this with alternative sources of supplies, such as new facilities SoCalGas may need in order to receive increased supplies from interstate pipelines. DEIS/EIR at 3-6. The DEIS/EIR similarly contrasts SES's purported access to SoCalGas with expansions SoCalGas would require to provide access to natural gas supplied from other LNG import terminal proposals, such as BHP Billiton's LNG project (DEIS/EIR at 3-16), or expansions that would be necessary for San Diego Gas and Electric Company's pipeline to receive and transport natural gas from LNG import terminal projects in Baja California, Mexico. DEIS/EIR, 3-10.

The DEIS/EIR is incorrect about the scope of SES's project and the necessary facilities and environmental impacts associated with this project, because SES has deliberately withheld information from the public and the government about expansions that SES knows would be required in order for SoCalGas to receive and transport up to 1 Bcf/d of natural gas from SES. According to SoCalGas' data responses to the CPUC on this very issue, SES's environmental consultant stated in its report to SES: "Based on the scope of the facilities described above for the 1,000 MMcf/d Case we recommend that public disclosure of these changes should only be made after the Harbor Development Permit (HDP) is issued. The HDP is scheduled for June 06." Exhibit PUC-11 at 8, accompanying Morris Declaration.

SoCalGas' intrastate pipeline could not receive up to 1 Bcf/d (1,000 MMcf/d) from SES on even an interruptible, infrequent basis without SoCalGas rebuilding two of its stations and constructing a five-mile looping pipeline. Exhibit PUC-11 at 6. SES and SES's environmental consultant were aware of the necessity of these facilities on the SoCalGas system in order for

SoCalGas to receive up to 1,000 MMcf/d from SES, and they even expected to complete the environmental work on it by March, 2006. Exhibit PUC-11 at 8-9.

Although SES had claimed that its proposed LNG import terminal could provide up to 1 Bcf/d of natural gas, the information it apparently provided to FERC and the POLB about necessary changes to SoCalGas' system rested on an 800 MMcf/d scenario, rather than a 1 Bcf/d scenario, for SoCalGas' receipt of SES's natural gas. Therefore, in this way, SES intended to file comments on the DEIS/EIR about minor changes on SoCalGas for interconnecting facilities. Exhibit PUC-11 at 8-10.

SES still intended that the expansion facilities be constructed on SoCalGas' system, and on March 22, 2005, SES clarified to SoCalGas that it still needed to go forward with the engineering necessary for the expansion to SoCalGas' facilities to receive up to 1 Bcf /d from SES. Exhibit PUC-11 at 11. SoCalGas went forward with the engineering work. Exhibit PUC-11 at 1, 7, 13. However, SES did not disclose these other SoCalGas facilities were necessary in its project description in the DEIS/EIR. Thus, the DEIS/EIR at 1-2 addresses ethane pipeline facilities, as well as electric distribution facilities under the CPUC's jurisdiction, because they are "integral parts" of the proposed project. Yet, the DEIS/EIR did not address SoCalGas' expansion of its facilities, which are necessary to receive up to 1 Bcf/d of natural gas from SES.

It is hard to imagine a better example of an omission of a "foreseeable phase" or "connected action" in order to evade the full environmental review of a project than what SES has done in the present case. This is a deliberate violation of CEQA and NEPA. While the drafters of the DEIS/EIR apparently did not know about the related SoCalGas facilities that must be reviewed in the DEIS/EIR, these facilities must be included in the project description, and under CEQA, the draft EIR must be recirculated.

In addition, this intentional omission calls into question the credibility of other information which SES has been providing (and not been providing) about its project. Since SES has been deliberately withholding relevant information here, what other misinformation has SES provided? Under these circumstances, FERC should grant the CPUC's pending motion (filed October 4, 2005) for an oral, evidentiary hearing. The CPUC and all other parties should be given formal rights to discovery, which are provided under Rule 401 of the FERC's Rules of Practice and Procedure when a case is set for hearing.

B. The DEIS/EIR fails to disclose the quantity of propane and facilities used to store the propane or transport the propane extracted from the LNG

SES's proposed LNG import terminal would need to extract NGLs, such as ethane, propane and butane, in order for the natural gas to meet the pipeline quality specifications of SoCalGas. DEIS/EIR at 1-1. The DEIS/EIR does not specify what facilities would be used for the extracted propane or butane. Nor does it specify the amount of propane or butane, which may be stored, let alone address the hazards associated with these NGLs.

Throughout this proceeding, SES's treatment of the NGLs has been a moving target as to what facilities would be necessary for the extracted NGLs. SES's original application planned for two NGL storage tanks: a 2,300,000 gallon storage tank for ethane and a 2,300,000 gallon storage tank for propane. See April 5, 2004 SES letter re: supplemental information, filed herein. An October 6, 2004 amendment by SES eliminated the NGL storage tanks and replaced them with two pipelines (ethane and propane) to take these NGLs offsite to ConocoPhillips' refinery 4.6 miles away. DEIS/EIR at 1-1. On December 1, 2004, SES submitted a supplement, which modified its NGL proposal to eliminate the propane pipeline and only have an ethane pipeline to the refinery, and which alleged that SES would only accept lean LNG from its suppliers. DEIS/EIR at 1-1. The problem is that with the elimination of the propane storage

tank and propane pipeline, the project description does not provide any facilities to receive or store the extracted propane or butane.

There is no doubt that some propane, and perhaps butane, would be extracted and stored at the LNG import terminal, and there is substantial reason to doubt SES's claim that it will regularly use "lean LNG." First, the facilities in the DEIS/EIR show that SES's processing of LNG will utilize a demethanizer to extract the heavier hydrocarbons from the methane and a deethanizer to separate the ethane, propane and heavier hydrocarbons. DEIS/EIR at 2-9 and 2-4 (diagram). Secondly, the DEIS/EIR states that SES will likely import LNG from up to 10 different LNG export plants in the Pacific or the Middle East. DEIS/EIR at 2-10. Therefore, supplies will vary. This will not just be one source, which can be confirmed as lean LNG supplies. Thirdly, Appendix C (p. C-1) to the Quest study, which is found in Appendix F of the DEIS/EIR, utilized for its calculations LNG which was 87% methane and 13% heavier hydrocarbons, including 3.4% propane.

Significantly, after the December 1, 2004 supplement eliminating the propane pipeline and claiming that SES will accept only "lean" LNG, SES contradicted this claim in two SES filings with the CPUC in February and March, 2005. Because its facility could adjust whatever high Btu natural gas it purchased, on February 11, 2005, SES stated that it could access supplies of LNG all over the world and still meet SoCalGas' gas quality specifications, "while other LNG projects will be limited to accessing 'lean' sources." See Exhibit PUC-18 at 3. On March 4, 2005, SES stated that propane extracted from the LNG will be used as fuel gas at SES's terminal and/or other industrial facilities in the Long Beach/Los Angeles corridor. See Exhibit PUC-19 at 2.

This failure to disclose what SES will do with the propane, and maybe butane, renders the project description incomplete, and requires the draft EIR to be recirculated. Storage tanks

with propane would be additional hazards, and the presence of propane in the LNG shipped to the site and stored at the terminal would add to risks to the general public. Havens Supp. at 23.

The contradictory statements by SES about lean LNG also further establish why discovery and oral evidentiary hearings are necessary. The SoCalGas expansion facilities, and SES's representations at the CPUC about how SES will meet the natural gas quality specifications for SoCalGas'intrastate pipeline, involved two matters under the CPUC's jurisdiction for which the CPUC could independently check SES's representations in the present proceedings before the FERC and the POLB. In both instances, the CPUC has found evidence, which seriously questions the credibility of SES's position before the FERC and POLB. Under these circumstances, the credibility of SES's position or information involving other matters in this proceeding may be questionable as well. Therefore, the CPUC's pending motion for an oral, evidentiary hearing should be granted.

Section 311(c)(2) of the EPAct of 2005 (as codified in section 3(e)(2) of the Natural Gas Act, 15 U.S.C. §§ 717b(e)(2)), requires a hearing on LNG import terminal applications. As the CPUC established in its pending motion filed on October 4, 2005, a trial-type hearing is necessary when there is a dispute of material facts *See Public Service Co. of New Hampshire v. FERC,* 600 F.2d 944, 955 (D.C. Cir. 1979). This is true even when the dispute involves a draft environmental impact statement. See 18 CFR 380.10. With SES's credibility now at issue, the parties should receive discovery rights and a hearing in this matter.

II. The DEIS/EIR Fails to Address Potential Impacts And Mitigation Measures

Under CEQA, an EIR must provide "detailed information to the public and to responsible officials about significant environmental effects of a proposed project." *Laurel Heights Improvement Assn. v. Regents of University of Calif.,* 47 Cal.3d 376, 391-392 (1988). These environmental effects include the project's adverse effects on the health and safety of people of

the State. 14 Cal. Code Regs. § 15126.2. Thus, an EIR must describe all mitigation measures that feasibly could minimize such impacts. 14 Cal. Code Regs. § 15126.4.

Similarly, under NEPA, an EIS is inadequate unless it takes a sufficiently "hard look" at potentially significant impacts. *Save the Yaak Committee v. Block*, 840 F.2d 714, 717 (9th Cir. 1988). And an "important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989).

In addition to these CEQA and NEPA requirements, section 311(d) of the EPAct of 2005 (as codified in section 3A(b)&(c) of the Natural Gas Act, 15 U.S.C. §§ 717bA(b)&(c)) has explicitly provided that before the FERC can issue an order authorizing an LNG import terminal, the FERC must review and respond specifically to issues raised by a State's Safety Advisory Report. Under new section 3A(b) of the Natural Gas Act, 15 U.S.C. §§ 717bA(b), the six factors for State and local safety considerations in the State's Safety Advisory Report concerning proposed LNG facilities are: "(1) the kind and use of the facility; (2) the existing and projected population and demographic characteristics of the location; (3) the existing and proposed land use near the location; (4) the natural and physical aspects of the location; (5) the emergency response capabilities near the facility location and (6) the need to encourage remote siting."

The CEC filed the State's Safety Advisory Report on September 7, 2005. As noted in the State's Safety Advisory Report at 12-13, these six factors for siting LNG facilities mirror the six factors in the NGPSA, 49 U.S.C. § 60103(a). Moreover, with two of the six factors involving population density and the "need to encourage remote siting," it would be contrary to these provisions of both federal statutes to risk the safety of the general public in the siting of the LNG import terminal. State's Safety Advisory Report at 30-33.

The DEIR/EIS fails to satisfy these requirements in numerous respects.

A. Significant impacts identified in the State's State Advisory Report were never addressed in the DEIS/EIR

The States' Safety Advisory Report at 11 identified three different types of hazard, which could result from an LNG spill and have potentially widespread impacts: (1) Pool Fire, where the LNG spill is ignited at the source, but its thermal radiation (thermal flux) is so hot that it can injure people some distance away from the fire; (2) Flash Fire, where the LNG spill forms into a vapor cloud, which can still be flammable for a certain distance and is ignited before it becomes too dissipated; and (3) Explosions, where the LNG or vapor cloud becomes confined and/or when the LNG is not pure methane.[4] The State's Safety Advisory Report at 13-14 requested that FERC identify the existing and planned land uses within one mile, two miles, three miles and five miles of the proposed site, and the FERC address the effects of LNG pool fires, flash fires or explosions (whether caused from terrorist acts, human errors, earthquakes or equipment/system breakdowns) on the residents and workers within those distances.

The DEIS/EIR at 1-17 acknowledges that, "On September 7, 2005 the State submitted to FERC a Safety Advisory Report on the proposed Long Beach LNG Import Project. At the time of the printing of this draft EIR/EIS the report is under review. After completing its review, the FERC will respond specifically to the issues raised by the CEC." Consequently, the DEIS/EIR is incomplete and should not have been issued, because it does not address many of the impacts provided in the State's Safety Advisory Report. *See Save the Yaak Committee v. Block*, 840 F.2d at 717; *Laurel Heights Improvement Assn. v. Regents of University of Calif.*, 47 Cal.3d at 391-392. Instead, the DEIS/EIR presents an image as if people were safe and faced no risks from the LNG import terminal if they were more than one mile away and outside of the Port of Long

[4] A fourth hazard, a jet fire, was considered to have a local effect.

Beach. In reality, there is a risk of significant safety impacts beyond the Port, as well as to the 2,000 workers within the Port. The DEIS/EIR simply did not analyze these risks.

(1) The pool fire's thermal flux impacts beyond the Port were never examined

(a) The DEIS/EIR's impact analysis for pool fires relied upon the 1600 Btu/hr/ft^2 (5 kW/m^2) Thermal Flux Standard

Using the NFPA 59A thermal flux standard of 1600 Btu/hr/ft^2 (which is the same as 5 kW/m^2), the DEIS/EIR stated that the maximum distances where the 1600 Btu/hr/ft^2 impact would be felt would be only at the property line of the proposed site if there were any spill at the LNG import terminal,. A person exposed to this amount of heat (i.e., 1600 Btu/hr/ft^2) for about 30 seconds would receive second-degree burns. DEIS/EIR at 4-141, Table 4.11.5 –2.

In terms of an LNG spill on water as a result of a collision or terrorist attack, the DEIS/EIR further cites the Sandia Report and ABS Consulting study to conclude that the maximum distance of the 1600 Btu/hr/ft^2 thermal flux level would be approximately 5,536 feet. DEIS/EIR, Table 4.11.7-3 on page 4-161. The Port of Long Beach's consultant, Quest, Inc. (Quest), reviewed what it considered to be the worst case scenario for a pool fire from the total release of LNG in a major earthquake, and computed a distance of 8,610 feet for the 1600 Btu/hr/ft^2 thermal flux level. DEIS/EIR, Appendix F, Table 7-3 In Volume II. Disclaiming that the worst case scenario would ever occur, Quest attempted to illustrate that this pool fire thermal flux level would mostly be within the boundaries of the Port of Long Beach. See Appendix F, Figure 4-13 at 4-27. Quest admits that it did not review many of the events or possibilities of releases of LNG for smaller quantities than under the worst case scenario. DEIS/EIR, Appendix F at 1-4, 7-1.

(b) The DEIS/EIR underestimates the adverse impacts to the public from LNG pool fires by failing to respond to the request in the State's Safety Advisory Report to consider exposures to less than the 1600 Btu/hr/ft^2 (5 kW/m^2) thermal flux level

The State's Safety Advisory Report at 15-16, expressed the State's concern that the 1600 Btu/hr/ft^2 (5 kW/m^2) thermal flux criterion does not adequately protect the public, because it does not consider the effects of longer duration of exposure (e.g., longer than 30 seconds) and the sensitivity of different populations that could be exposed. The Report noted that the approach California uses in the licensing of powerplants is "no observable adverse affect level," and also stated that the FERC should use a 1.5 kW/m^2 (which is the same as 480 Btu/hr/ft^2) thermal flux level to consider the impacts. (Hereinafter, only the Btu/hr/ft^2 will be utilized).

Notwithstanding the State's Safety Advisory Report clear request on September 7, 2005 for an impact analysis utilizing the lower thermal flux level, the DEIS/EIR was issued one month later without discussing this impact. The significance of the DEIS/EIR's lack of this hazardous impact analysis is that it underestimates the distance of the harm to the general public from the potential pool fires analyzed by the Sandia Report and the ABS Consulting study, which are referenced in the DEIS/EIR.

The CPUC's expert witness, Dr. Jerry Havens, has been studying LNG safety issues for approximately 30 years. Dr. Havens explained that there was scientific consensus that people exposed to a lower thermal flux level than 1600 Btu/hr/ft^2, but over a longer period of time than 30 seconds, could receive second-degree burns or worse. See Havens Testimony at 10-13. For example, according to the ABS Consulting study, exposure to the thermal radiation flux of 1600 Btu/hr/ft^2 will cause intense pain within 13 seconds, first degree burns in 20 seconds, second degree burns in 30 to 40 seconds and third degree burns (1% fatality) in 50 seconds. Exhibit PUC-7 at 32. Citing FEMA, the ABS Consulting study's Table 2.2 shows that exposure to the thermal radiation flux of 1300 Btu/hr/ft^2 will cause intense pain within 18 seconds and second

degree burns in 57 seconds, whereas exposure to the thermal radiation flux of 1000 Btu/hr/ft^2 will cause intense pain within 27 seconds and second degree burns in 92 seconds. Exhibit PUC-7 at 30.

In view of the above, only measuring distances based upon a 1600 Btu/hr/ft^2 thermal radiation flux level or higher, like the DEIS/EIR has done, does not reveal the full distances away from the pool fire for which people would still be in harms' way. At a further distance from the pool fire, the exposure over a longer period of time to a thermal radiation flux level lower than 1600 Btu/hr/ft^2, but higher than 480 Btu/hr/ft^2, is unsafe, which is why Dr. Havens states there needs to be a three mile exclusion zone. Havens Testimony at 10-13.

Regardless of whether or not the current NFPA 59A standard of 1600 Btu/hr/ft^2 is used for siting most LNG facilities in the United States, it is particularly ill-suited for siting an LNG import terminal in a densely populated area, such as in the present case. In a remote setting, it may be possible to mitigate the impacts to a few nearby people from a pool fire. It is inconceivable that the 130,000 people within three miles of a large pool fire at SES's proposed site could be protected. Havens Testimony at 16; Havens Supp. at 25-26.[5]

This is clear when considering the LNG industry's recent rejection of an amendment, which proposed to lower the thermal flux level in the NFPA 59A minimum standards. The NFPA Committee's rejection relied upon the following reasoning in a paper it attached to its report: "However, it is also known that when human beings are exposed to a heat episode they tend to take evasive action within 5 seconds of exposure. It is estimated that a person can

[5] By underestimating the distance of such adverse impacts, the DEIS/EIR failed to consider the disproportionately high impact of the proposed LNG project upon the minority and low income population near the proposed site. In 2005, within a 3-mile radius of the proposed site, the residential population was 85,124, 65.2% were Hispanic and the median household income was $27,000. State's Safety Advisory Report at 8. The percentage of minorities is much higher than 65.2% when also considering African-American and other minorities residing in the closest residential neighborhoods to the proposed site. Phelps Testimony at 13-14, Exhibit PUC-16.

ambulate at a speed of 4 m/s in an emergency . . . . Therefore in a 30 second exposure a person can safely run away to a distance of 100 m at which distance the radiant intensity will be far less and thus avoid suffering a second degree burn. . . ." See Exhibit PUC-8, at p. 59A-5.

In a densely populated area, there undoubtedly would be children of insufficient age, as well as senior citizens and people with disabilities, who would not be capable of running out of the way as quickly as the NFPA Committee assumed. Moreover, most people would not know what to do and may panic if they started feeling intense pain or received burns from a fire more than one mile away. See Havens Supp. at 11-12.

(2) The DEIS/EIR never examined the impacts beyond the LNG site from a flash fire resulting from an LNG vapor cloud

(a) The DEIS/EIR failed to consider empirical tests and the fact that LNG spills mix with air, which increases their volume

The DEIS/EIR at 4-142 assumes that an LNG spill, which occurs while transferring the LNG from the ship to the storage tanks in the proposed terminal or from the storage tanks to the vaporizers, would be contained in the impoundment area of the LNG import terminal and comply with the vapor dispersion exclusion zone requirements in 49 CFR § 193.2059. Assuming a spill of 75,000 gallons of LNG or less, SES asserts that the spill would only be 39% of the vapor exclusion zone and would stay on the property of the proposed site. FERC staff asserts that its use of the DEGADIS model and SOURCE5 verify that the vapor cloud from the LNG spill would stay on the property. However, the DEIS/EIR failed to examine DOT tests, which disproved these assumptions.

In actuality, SES's proposed LNG import terminal would violate even the minimum DOT safety regulations concerning spills during the unloading from the ship or from storage tanks. See 49 CFR § 193.2059. SES's theory that 75,000 gallons of LNG would only comprise 39% of the vapor exclusion zone and would not go over the 20-foot-high security wall was disproven

many years ago by the DOT's experimental tests, which were known as the "Falcon tests." In four different experiments, the volume of the LNG spill ranged between 14% to 46% of the containment area surrounded by a tall fence. In each experiment, the flammable vapor cloud went over the fence and was not contained in the exclusion zone. Havens Supp. at 18-22 Consequently, a spill while unloading the LNG, could go well beyond the proposed site and have more widespread impact than assumed in the DEIS/EIR.

The DEIS/EIR underestimated the spread of the vapor cloud by failing to consider that spilled LNG will warm up and mix with air, thereby significantly increasing its volume. The DEIS/EIR's assertion that the DEGADIS and SOURCE5 verify that the vapor cloud from the LNG spill would stay on the property is erroneous. This is because the use of SOURCE5 erroneously assumes that there would be no air mixed into the gas until it overflowed the impoundment and this is an incorrect input into the DEGADIS model. Havens Supp. at 21-22 Dr. Havens knows that the DEGADIS model does not support this assertion in the DEIS/EIR. He is the creator of the DEGADIS model. Havens Supp. at 22.

(b) The DEIS/EIR never even analyzed the 550,310-gallon spill from the marine transfer line

While the DEIS/EIR, Table 4.11.5-1 at page 4-139, lists the spill size for a ship unloading line (aka "marine transfer line") as 550,310 gallons, the DEIS/EIR at page 4-142 inexplicably refers to a spill from a marine transfer line as only being 39,600 gallons with a design spill of 75,000 gallons. These discrepancies within three pages in the same document are serious ones. Havens' Supp. at 16-18. Because the LNG vapor cloud from a 75,000 gallon LNG spill would leave the LNG import terminal property, then obviously, a 550,000 gallon LNG spill would be flammable and spread over even a much greater distance.

(c) Quest's worst-case scenarios show that a flammable vapor cloud could spread a distance of more than six miles

In Appendix F of the DEIS/EIR, there are two tables showing Quest's analysis of worst-case impacts, which assume a maximum distance for a flash fire caused by a flammable vapor cloud from SES's proposed LNG import terminal of either 34,600 feet (see Table 6-4 at p. 6-8) or 36,400 feet (see Table 7-1 at p. 7-4). In either case, the maximum distance for a flash fire shows that people could be burned or killed more than six miles away from the proposed site. While Quest speculates that this worst-case scenario could never happen, it also admits that it did not review many of the events or possibilities of releases of LNG for smaller quantities than under the worst case scenario, and it only used publicly available information. DEIS/EIR, Appendix F at 1-4, 7-1. Moreover, Quest disputes that a flammable vapor cloud could spread as far as 36,400 feet without being ignited and turning into a flash fire at a shorter distance. DEIS/EIR, Appendix F at 7-5. That may well be the case, but there is a lot of distance between the proposed site and the 36,400 feet maximum distance where, under some scenarios, the vapor cloud could spread before igniting.

The DEIS/EIR never addresses all of the other scenarios in between these two extremes (staying on the site or spreading 36,400 feet) and there undoubtedly would be many. For example, Dr. Havens has calculated a flammable vapor cloud that could spread for 3 miles from a spillage of 3 million gallons, which Sandia Laboratories found was possible. Havens Testimony at 11. A 75,000-gallon and a 550,300-gallon spill on the site could form a vapor cloud and leave the site. Havens Supp. 17-18. In between Quest's two extremes are also the 2,000 workers in the Port, residential neighborhoods as close as 1.3 miles away, tourist attractions and parks as close as 1.5 miles away, and downtown Long Beach two miles away. A flammable vapor cloud traveling a shorter distance than six miles from the site, before being ignited, can kill or burn a significant amount of people in this densely populated area.

(3) The DEIS/EIR ignored evidence that LNG accidents could result in a Boiling Liquid Expanding Vapor Explosion

Nowhere does the DEIS/EIR address the potential impacts of a Boiling Liquid Expanding Vapor Explosion ("BLEVE"), or explosion caused by the natural gas liquids (NGLs), such as propane, ethane and butane, which will be in LNG or extracted from LNG. Moreover, because LNG vapors can explode when confined, Havens Supp. at 23, the DEIS/EIR should have addressed this hazard is well.

Quest's theory that a BLEVE is not possible with LNG, DEIS/EIR, Appendix F, at 6-10, is simply wrong. It happened on June 22, 2002 in Spain when an LNG tanker truck was in an accident, rolled over, burst into flames, and, 20 minutes later, the truck exploded and released a fireball. Two people received severe burns 650 feet from the truck, and the motor and cabin of the truck were propelled more than 840 feet from the explosion. Havens Testimony at 13 and Ex. PUC-3 at 26-27. It can therefore happen again. However, nowhere does the DEIS/EIR address this empirical example.

(4) The DEIS/EIR's analysis of the data concerning the safety of LNG tanker trucks fails to consider contrary and more recent evidence

The State's Safety Advisory Report at 13 requested that the DEIS/EIR look at the safety of sending LNG fuel trucks each day from the Port through the Los Angeles metropolitan area and to elsewhere in California. The DEIS/EIR at 4-188 confined its analysis of the safety of LNG tanker trucks to accidents of LNG tanker trucks in the U.S. through 2002 and concluded that only four of the accidents resulted in any loss of product, and none of the releases were substantial or resulted in the ignition of vapors and subsequent fire. DEIS/EIR at 4-188.

By limiting the safety analysis to the United States through 2002, the DEIS /EIR omitted any discussion of the LNG tanker truck in Spain during 2002, which caught fire and exploded. Havens Testimony at 13 and Ex. PUC-3 at 26-27. Moreover, although the DEIS/EIR was issued

in October, 2005, it did not refer at all to the LNG tanker truck, which caused a fire in Fernley, Nevada on September 14, 2005. This fire caused the evacuation of people within a mile of the fire, and had personnel from five fire departments also moving back a few times and staying a mile away until approximately four hours later, when most of the LNG had been consumed by the fire. Exhibit PUC-12 at 7-9; Havens Supp. at 24. Consequently, the DEIS/EIR failed to consider recent accidents, which are contrary to its conclusion as to the safety of the LNG tanker trucks. This also shows how unreliable the statistical analysis is within the DEIS/EIR, based upon how time periods and geographical lines were drawn. The data and analysis were incomplete.

(5) The DEIS/EIR never addressed the impact of the combined effect of a fire from an LNG spill and flammable and/or toxic materials in the Port of Long Beach

The State's Safety Advisory Report at 16 points out that the Port of Long Beach is also home to many facilities dealing with hazardous chemicals, and there could be a cascading effect with even more severe consequences if a fire were to make contact with hazardous materials within the Port of Long Beach. Notwithstanding the State raising this concern, the DEIS/EIR has no discussion concerning the hazardous chemicals in the Port of Long Beach. In fact, the subject is avoided.

In the Quest study in Appendix F to the DEIS/EIR in Table 6-4 at page 6-8, Quest compares three other facilities with the proposed LNG import terminal at the Port Long Beach in terms of worst-case scenarios.[6] Quest points out that the three other facilities in its Table 6-4 did not store or process in a significant amount toxic materials, but it does not make that statement with regard to the proposed LNG import terminal at the Port of Long Beach. Appendix F to the

[6] Quest's comparison actually shows that SES's proposed LNG import terminal can have much more widespread impacts than the other examples. Havens Supp. at 7-9.

DEIS/EIR at 7-8. Indeed, as a qualification of its hazard analysis, Quest states at pages 7-8 that the comparison of potential hazards between those three other facilities and the proposed LNG import terminal is based solely on the flammable nature of the hydrocarbons processed and stored in each. This implies that the hazard may be far greater at the Port of Long Beach if the hazardous chemicals were considered, as well.

When flammable LNG vapor cloud spreads beyond the site and is ignited within the Port, it can become a flash fire, and cause a chain reaction. Immediately adjacent to the proposed site on Pier T are terminals used for unloading lumber and oil, which can spread the fire. State's Safety Advisory Report at page16. Numerous other items in the Port are flammable, as well. A fire originating in the Port can spread and cause additional fires fueled by the other cargo and flammable materials. The wind could spread the fires even further. Phelps Testimony at 9-13.

The DEIS/EIR also acknowledges in two places that at the 10,000 Btu/hr/ft^2 thermal flux level, wood could ignite spontaneously and steel structures could be damaged after several minutes of exposure. See DEIS/EIR at 4-141, Table 4.11.5–2; DEIS/EIR, Appendix F at 5-1. It also shows that under certain scenarios of pool fires from the spilled LNG, major portions of the Port of Long Beach can be exposed to the 10,000 Btu/hr/ft^2 thermal flux level. DEIS/EIR, Appendix F at 5-4 through 5-7, 5-10 through 5-16. Therefore, there is a potentially significant adverse impact concerning the release of flammable or toxic materials, which is not addressed by the DEIS/EIR. Phelps Testimony at 3-6.

(6) The DEIS/EIR never addressed the devastating economic impact that could occur in light of all the commercial activities and critical infrastructure already existing in the Port of Long Beach

The State's Safety Advisory Report at 16-20 refers to the significant commercial activity and critical marine petroleum infrastructure at the Port of Long Beach, and how a catastrophic release of LNG could be devastating to the West Coast and to the economy. More than 25% of

all cargo containers moving through the ports on the West Coast, approximately $96 billion in trade, was transported through the Port of Long Beach. Approximately 60% of imported crude oil and 80% of imported refined petroleum products are shipped to California through the ports of Long Beach and Los Angeles to marine terminals, which are within three miles of the proposed LNG import terminal site. Nowhere in the DEIS/EIR is there any discussion of this economic impact.

This is significant for two reasons. First, of course, it is very important that decisionmakers understand all of the possible adverse consequences if they were to decide to authorize an LNG import terminal at the Port of Long Beach. Even if the impacts of an LNG accident were confined to the Port, it could have devastating impacts to the 2000 workers in the Port, and to the economy of the State of California and the United States.

Secondly, Quest's speculation, that terrorists would not be interested in attacking an LNG tanker or an LNG import terminal at the Port of Long Beach, ignores that the Port already may be a potential target even before the LNG import terminal is even built. The LNG terminal at the Port of Long Beach could further increase the risk of a terrorist attack as well as cause much more devastation from such an attack, and Quest's statistics about other facilities not being attacked or targeted by terrorists are irrelevant. Yet, this impact is not even addressed.

B. The DEIS/EIR's statistical analysis of probabilities fails to take into account the combination of factors, which increase the risks

In Appendix F of the DEIS/EIR at 3-13, Quest alleges that the chances of a successful terrorist attack on the Port of Long Beach are seven in a million per year, based upon the fact that 12,711 facilities since 1993 had not been successfully attacked. However, the DEIS/EIR at ES-14 contradicts Quest's ability to calculate the odds of a terrorist attack, by stating "[u]nlike accidental causes, historical experience provides little guidance in estimating the probability of a terrorist attack on an LNG vessel or onshore storage facility." Even Quest contradicts itself by

noting it is impossible to predict the probability of occurrence of specific intentional events (such as those perpetrated by vandals or terrorists). DEIS/EIR, Appendix F at 3-9.

Of course, Quest never showed that terrorists ever tried to attack those 12,711 facilities and were unsuccessful.[7] If terrorists did not even try to attack 12,710 of those facilities, it would not demonstrate the odds of their success if and when they choose to attack the facility. Moreover, Quest's statistics of facilities that terrorists did not choose to attack are meaningless, because Quest has never shown that any of the other potential targets would be comparable to an LNG import terminal at the Port of Long Beach considering that: (1) the Port of Long Beach is critical to the economy; (2) the Port of Long Beach is in a densely populated urban area; (3) the proposed LNG import terminal would store enough LNG to be able to either produce a flammable vapor cloud which can cover any area more than a six miles area away from the site, or result in a pool fire, which can cause fatalities or burns to people up to three miles away; (4) there will up to 120 LNG tankers per year bringing new LNG supplies to the Port of Long Beach and (5) the Port has hazardous and flammable materials in the vicinity of the site, which could add to the fire.

Sandia National Laboratories has found it credible and possible for a terrorist attack on an LNG ship to cause at least 3,000,000 gallons of LNG to spill. Havens Testimony at 10-12; Exhibit PUC-6 at 49-50, 54, 61-62. The confidential treatment herein by the FERC and Coast Guard of much of the documents concerning the proposed LNG import terminal is further corroboration of the possibility of successful terrorist attacks. There is clearly a risk of an LNG spill and pool fire from a terrorist attack at the proposed LNG terminal.

[7] Quest notes that a propane terminal "was the subject of a foiled sabotage effort by two U. S. citizens in 1999." DEIS/EIR, Appendix F at 6-2. Simply because one plan by two people was unsuccessful hardly establishes that other plans by other people would be unsuccessful.

The DEIS/EIR also fails to take into account the potential combination of causes of an LNG catastrophe. In addition to a terrorist attack, other potential causes of an LNG spill are by an earthquake or by human error. As demonstrated by the accident in the Algeria LNG export facility in January, 2004, human error, by itself, can be fatal at a facility with LNG and NGLs. Havens Supp. at 24-25. Moreover, since an earthquake can cause a catastrophic release of LNG, human error in combination with an earthquake, could be a factor in such a catastrophic release, because humans must analyze, design and construct the structural foundation and the facilities to mitigate the effects of the earthquake. In addition, human error in combination with a terrorist attack could cause a catastrophic result. The security measures to protect the LNG shipments and the terminal, and the 24/7 monitoring of the LNG facilities and its surrounding area may at some point have a breakdown because of human error.

C. The DEIS/EIR's deferral of an evacuation plan fails to address this mitigation measure

The DEIS/EIR at 4-168 recognizes that there are number of issues concerning the viability of an emergency evacuation plan. Nevertheless, it does not address any specific emergency evacuation measures or standards for the emergency evacuation plans. Instead, it defers until a time after the EIS/EIR is certified for SES to first develop an emergency evacuation plan subject to approval by the FERC and Port of Long Beach. The only qualification is that SES must submit this for approval by the Director of the FERC's OEP prior to the initial site preparation.

The CPUC submits that an evacuation plan would not be able to mitigate the adverse impacts in many of the situations in which an LNG spill can occur. Many of these adverse impacts would happen so quickly that first responders would simply not be able to respond in time to evacuate anyone who was in harm's way. The thermal flux from the pool fire can cause burns in less than a minute. A vapor cloud can spread in minutes and suddenly turn into a flash

fire. An explosion can happen suddenly, as well. Except for the spreading of the fire and other consequential or cascading effects, after the initial explosion or fire, much of the initial adverse impacts would not be mitigable. See Havens Supp. at 25-26.

The DEIS/EIR does not admit that the adverse impacts cannot be mitigated, but does not address how the evacuation plan can be effective. Particularly in the case of a significant LNG spill, how can this densely populated area in the City of Long Beach and the City of Los Angeles be evacuated? The DEIS/EIR gives no opportunity for comments, because it leaves this until later without any guidelines as to how the evacuation plan should work. This is contrary to the requirements under CEQA. The EIR may not defer analysis and mitigation of impacts. When no standards, criteria or alternatives to consider are set out for mitigation measures, the EIR is insufficient. *See Endangered Habitats League, Inc v. County of Orange*, 131 Cal. App. 4th 777, 793-94 (2005).

D. The DEIS/EIR's description of preliminary plans to mitigate seismic problems is incomplete and inadequate

There are serious seismic problems at the Port of Long Beach, because there are 27 active earthquake faults between 1.4 miles and 106.3 miles away from the Port, and the Port is built on landfill. SES's Resource Report No. 6, Table 6-3, at 8-9. Consequently, there is a significant potential for soil liquefaction where the whole LNG terminal can collapse. SES's Resource Report No. 6 at 11; DEIS/DEIR at 4-5 through 4-10. Therefore, it is critically important that the specific geotechnical engineering plans and other structural work being utilized to protect against the effects of an earthquake be adequately described.

The DEIS/EIR at 4-12 states that SES planned to construct the LNG terminal under the pile foundations, "subject to final geotechnical assessment and final engineering design." Even the tentative plans have options: "The current design calls for either concrete *or* tubular steel piles." Id. "The upper five to 15 feet of fill and soil *may* also be removed from beneath the LNG

tanks. . . ." Id. at 4-12 through 4-13. There will be a reinforced concrete base slab foundation . . . with seismic isolators *or* access to a flexible foundation to reduce horizontal seismic load." Id. at 4-13 (emphasis added). Not only is this tentative with numerous options, but general phrases like "a flexible foundation" are not spelled out.

What we are left with is that when SES decides what it finally wants to do, "SES would provide the final plans to the FERC and POLB staffs for review." DEIS/EIR at 4-13. Moreover, the POLB itself is "evaluating three options to strengthen the shoreline." DEIS/EIR at 4-13. Which option will it choose?

We still can not tell from this DEIS/EIR what the final plans will be or how can we tell from this description at this point in time whether Long Beach residents are safe from earthquakes causing the structure to collapse and release LNG. Moreover, how can anyone tell what environmental damage may be done from the construction of the new structure for foundation of the LNG terminal? This is premature to issue the DEIS/EIR at this time for comments.

E. The Coast Guard security measures to protect against terrorists' attacks are not completed at this time

On June 14, 2005, the Coast Guard initiated an evaluation of the suitability of the waterway for the LNG tankers and the security measures necessary to guard against terrorist attacks. DEIS/EIR at 1-8. The DEIS/EIR states that the security measures would reduce the probability of a successful terrorist event, but states that the Coast Guard has not yet prepared its Waterway Suitability Assessment (WSA), which will decide this matter. DEIS/EIR at ES-14

The WSA probably will not be done until after January, and presumably there will be a public version and a more thorough confidential version. The parties will not even have the public version at the time they must file comments on this DEIS/EIR, and have no opportunity here to comment on these potential mitigation matters.

III. The DEIS/EIR Fails to Adequately Consider Safer Alternatives

Under CEQA, an EIR must "describe feasible measures which could minimize significant adverse impacts" and "describe a range of reasonable alternatives to the project." 14 Cal. Code Regs. §§ 15126.4(a); 15126.6(a). "[P]ublic agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects. . . ." Cal. Pub.Res. Code § 21002. If a project has a significant effect on the environment, an agency may approve the project only upon finding that it has "[e]liminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." 14 Cal. Code Regs. § 15092.

Although NEPA lacks CEQA's substantive requirement that an agency may not approve a project where its effects can be mitigated, NEPA still requires an agency to analyze reasonable alternatives to the proposed project, and to disclose potential mitigation measures. *See Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 352 (1989).

A. Other alternative sites for an LNG import terminal meet the primary objective of SES's proposed LNG import terminal and are much safer alternatives

The primary objective of SES's proposed LNG import terminal is to provide up to 1 Bcf/d of natural gas to Southern California. DEIS/EIR at 1-2 through 1-4. SES claims its second objective is to provide up to 150,000 gallons per day of LNG vehicle fuel, and its third objective is to provide storage of up to 320,000 cubic meters of imported LNG to reduce fluctuations in the local supply. DEIS/EIR at 1-2. However, the sheer size of the LNG import terminal and the estimates of up to 120 LNG tankers delivering LNG to SES's proposed terminal each year makes clear how this project is driven by the first objective, providing up to 1 Bcf/d of natural gas to

Southern California, nearly 16% of the average daily need for the entire State of California. DEIS/EIR at 1-4.

The order of magnitude between how much of the LNG will be used for natural gas supply compared to how much will be used for LNG vehicle fuel is quite telling. LNG would be unloaded from ships into two storage tanks, which combined hold 320,000 cubic meters. The LNG would be regasified through three vaporizers, each one capable of vaporizing approximately 350 MMcfd of LNG. DEIS/EIR at 2-6 through 2-7. In contrast, the trailer truck facility would contain only a 3,800 cubic meter storage tank for LNG vehicle fuel. DEIS/EIR at 2-9. Therefore, less than 1% of the LNG in storage would be able to be stored as LNG vehicle fuel at any given time. Consequently, SES's second objective pales in comparison to its first and primary objective.

According to the DEIS/EIR at 3-8, two proposed LNG projects in Baja California, Mexico, (i.e., Chevron Texaco and Sempra Energy LNG) would each be designed to provide more than 1 Bcf/d of natural gas during peak times and have LNG storage facilities. Therefore, most of SES's objectives could be accomplished from these alternative sites in Baja California, Mexico. The DEIS/EIR at 3-7 states that LNG facilities under the jurisdiction of another country would inherently not provide the same security of supply as a facility in the United States would. However, LNG supply to any of these LNG import terminals, including SES's proposed project, would be from a foreign country. Therefore, under this logic, none of the LNG import terminals would have a secure source of supply. Accordingly, these two proposed LNG projects must be considered as alternatives to SES's proposed project.

Two other proposed LNG import terminals offshore of Southern California in federal waters (i.e., BHP Billiton and Crystal Energy) have pending proposals to construct LNG import terminals, which would each provide approximately 800 MMcf/d of natural gas and more than 1

Bcf/d during peak times. DEIS/EIR at 3-13 and 3-14. Therefore, these two LNG proposals would be able to meet most of SES's objectives and must be considered as alternatives to SES's proposed project.

Although the DEIS/EIR recognizes that BHP Billiton would also have LNG storage capacity, the DEIS/EIR at 3-14 notes that Crystal Energy would not have storage capacity on its site. However, the storage function was only listed as a third objective by SES. Moreover, the DEIS/EIR fails to address the extent to which Crystal Energy could use storage onshore as a viable alternative to having storage on its site and have the capability of meeting fluctuating needs. Consequently, all four of these proposed LNG import terminals should be considered alternatives to the proposed LNG site at the Port of Long Beach, notwithstanding the claim in the DEIS/EIR at 3-17 that none of these projects could meet all of SES's objectives. Because they can meet most of the objectives, in particular the primary objective, they must be considered alternatives. 14 Cal. Code Regs 5126.6.

The DEIS/ EIR does not give any details as to the purportedly significant environmental impacts that purportedly could be far greater with regard to these four proposed LNG import terminals compared to SES's proposed LNG import terminal. Consequently, it has not provided an adequate analysis for comparing these alternatives.

None of the four above-mentioned LNG import terminals would be located in densely populated areas, in contrast to SES's proposed LNG import terminal. Specifically, the Southern California LNG import terminal proposals by BHP Billiton and by Crystal Energy would be more than 10 miles offshore, and therefore the impacts analyzed by the various experts in this proceeding, including the worst case scenarios, would not be a risk to the safety of the people onshore. Havens Testimony at 16-17. SES's proposed LNG import terminal risks the health and safety of approximately 130,000 people, who live or work within three miles of the proposed

site, not even counting the worst case scenario. Havens Testimony at 10-13, 16. Indeed, in contrast to the flammable material near SES's proposed site, which could fuel and further spread a fire, the BHP Billiton and Crystal Energy projects would have 10 miles or more of ocean water, which is not flammable, as a cushion between these import terminals and the people onshore.[8]

The DEIS/EIR at 3-17, also concedes that the toxic air pollutants at SES's proposed site at the Port of Long Beach would have a direct impact on the existing air quality in the area. It further observes that the proposed LNG import terminals miles offshore would disperse air emissions from these LNG import terminals and would therefore present much less of the health risk compared to SES's proposed project.

Under the circumstances, these alternative LNG import terminals would be much safer than SES's proposed LNG import terminal at the Port of Long Beach. By the same token, SES could have itself proposed an LNG import terminal offshore with storage at numerous other sites which would be safer than the densely populated site it has chosen. At the very minimum, these alternatives should have been much more thoroughly examined in the DEIS/EIR than just the few paragraphs spent on each of them.

B. The DEIS/EIR fails to consider much safer alternatives which could provide LNG fuel or Compressed Natural Gas fuel for vehicles

As discussed above, the LNG fuel for vehicles is such a disproportionately small part of this proposed LNG project (in terms of volumes, and therefore in terms of economics), that it should not be used as a justification for ignoring much safer alternatives. To the extent,

[8] The two LNG import terminals proposed for Baja California, Mexico, would also be in more remote settings than the Port of Long Beach. One would be offshore, located eight miles off the coast of Mexico and the other would be 14 miles north of the City of Ensenada. DEIS/EIR, Table 3.2.2-1 at 3-8. These proposed LNG sites were not evaluated by the CPUC's expert witness, Dr. Havens.

however, that the objective of providing LNG fuel for vehicles should be considered in this review process, the DEIS/EIR fails to consider much safer alternatives which could achieve this objective as well. There are numerous other ways to provide LNG fuel for vehicles even if it cannot be transported by pipeline from an offshore facility.

Instead of storing 320,000 cubic meters of LNG and extracting large quantities of NGLs at a site within three miles of a 130,000 people, (and further bringing to that site120 ships each year with each transporting at least 125,000 cubic meters of LNG), just so that a 3,800 cubic meter LNG vehicle fuel storage tank can be filled and used to fuel LNG fuel trucks, the DEIS/EIR should have considered SES utilizing an offshore LNG import terminal and transporting the natural gas through an offshore pipeline. For the small fraction of LNG need for LNG fuel, SES could have done one of the following alternatives:

1. SES could have shipped LNG vehicle fuel in a small LNG storage tank from the offshore import terminal to an onshore location for fueling LNG tanker trucks. This still poses a risk, but does not pose a widespread risk, because it involves so much less LNG. Moreover, this risk could be further mitigated if a smaller ship transported the small amount to a more remote setting than the Port of Long Beach. Effross Testimony at 5-6.
2. SES could have transported 100% of the natural gas through the offshore pipeline and set up a liquefaction facility, storage tank and refueling station onshore at the Port of Long Beach or any other more remote location(s). Effross Testimony at 6.

SES also could have transported 100% of the natural gas through the offshore pipeline and set up a facility for fueling compressed natural gas (CNG) vehicles at the Port of Long Beach or at more remote settings. Effross Testimony at 6-7.

Even if SES did not want to construct and operate the liquefaction and LNG fueling station(s) or CNG fueling station(s), it could have sought a partner or contracted with another company to do so. Effross Testimony at. By the same token, the DEIS/EIR should have considered the fact that any other alternative LNG import terminals, discussed above, could also achieve this objective by having a partner or contracting with another company to set up a liquefaction and LNG fueling station(s) or a CNG fueling(s) station.

C. The DEIS/EIR's failure to consider alternative, less polluting fuels made its analysis of alternatives deficient

By listing these alternatives, the CPUC is not stating a position in favor of or against LNG fuel for vehicles. In light of the safety risks associated with LNG, including the safety of LNG tanker trucks that will transport the LNG to other places in California for LNG vehicles, the CPUC submits that people or entities considering LNG vehicles should be informed of the LNG tanker truck, which exploded in Spain in 2002, and the LNG tanker truck, which caused a fire in Nevada on September 14, 2005. Havens Supp. at 23-24; Exhibit PUC-12. The DEIS/EIR's failure to provide this recent information also caused its analysis of SES's proposed LNG import terminal and the alternatives to be deficient.

In considering alternatives to SES's proposed LNG import terminal, the DEIS/EIR also failed to consider the alternative of an offshore LNG import terminal and use of fuels other than natural gas, which would also substantially decrease pollution. Effross Testimony at7.

The alternative analysis by the DEIS/EIR was totally deficient and undermines the entire purpose of NEPA and CEQA.

IV. The Board of Harbor Commissioners of the Port of Long Beach Should Reject the Draft Port Master Plan Amendment No. 20

In addition to deciding whether or not to certify the final Environmental Impact Report (EIR) under CEQA, Cal. Pub. Res. Code §§ 21000, *et seq*., the Long Beach Board of Harbor

Commissioners (Board) must also decide whether or not to adopt the Draft Port Master Plan Amendment No. 20 (DPMPA) and submit it to the California Coastal Commission (CCC). Without such an amendment, SES cannot be offered a lease of any property in the Port of Long Beach for SES's proposed LNG import terminal. Therefore, as purely a matter of state law, the Board and the CCC must determine whether or not SES's proposed LNG import terminal at the Port of Long Beach would be contrary to provisions of the California Coastal Act (CCA), Cal. Pub. Res. Code §§ 3000, *et seq*.

A. The DPMPA is contrary to the California Coastal Act

(1) The location of SES's proposed LNG import terminal poses too much risk to people living, working or visiting recreational areas near the proposed site

As discussed above, the significant hazards posed by this particular project would be contrary to the California Coastal Act, Cal. Pub. Res. Code §§ 3000, *et seq.*, which clearly requires consideration of public safety along with private property rights, orderly economic development, and environmental and public access concerns. *See Carstens v. California Coastal Com.*, 182 Cal.App.3d 277, 290 (1986).

Under the California Coastal Act, the location of a new, hazardous facility should be away from areas: where the general public may work or live (see Cal. Pub. Res. Code § 30250(b)); where there are geologic hazards (see Cal. Pub. Res. Code § 30253(a)); or and where there are popular visitor destination points for recreational uses. See Cal. Pub. Res. Code § 30253(d)). Overall, a new hazardous facility should not be sited where it would be adverse to the public welfare. See Cal. Pub. Res. Code § 30260(d)).

In the POLB staff web comments at 11-13, they attempt to justify the siting of the proposed LNG import terminal at the Port of Long Beach, because there is an existing crude

petroleum terminal and hazardous cargo facilities in the area.[9] However, this is precisely one of the reasons why the proposed LNG import terminal should not be sited there. Because the LNG import terminal, as well as the 120 LNG ships bringing LNG to the terminal, would have enormous volumes of LNG, an accident, earthquake, or terrorist-caused spill could have widespread, devastating impacts. An intense LNG pool fire or a flammable LNG vapor cloud spreading and then igniting in an area with petroleum terminals and hazardous materials, could result in numerous fires, spread the fire to other parts of the Port and outside of the Port, cause numerous fatalities and injuries, and destroy infrastructure critical to California's economy. Havens Supp. at 6-7; Phelps' Testimony at 2-3, 5-13. Indeed, in Quest's comparison of the distance of the worst case adverse effects from SES's LNG import terminal to other facilities with flammable materials, SES's proposed LNG import terminal's impacts were at least four times more widespread than the next closest facility. Havens Supp.at 8-9. It is also for this reason, that the siting of the LNG import terminal in the industrial area in this instance would still be too close to existing developed areas where people live, work or enjoy recreational activities. See Havens Testimony at 10-11, 16; Phelps Testimony at 13-15.

The POLB staff web comments at 12 concede that the Port of Long Beach is an area of high geologic hazards. However, they point out that the design criteria for the terminal will follow the Port's protocol, which is more stringent than criteria required by the FERC. They also assert that the probability of the earthquake causing the LNG storage tanks to fail is once every 15,000 years.

There are numerous problems with this analysis. First, as discussed above, there is nothing certain about how the foundation for the proposed LNG terminal will be constructed.

[9] The POLB staff comments are posted on the Port of Long Beach's web site (POLB staff web comments), and, only, in part, also included in the DEIS/EIR.

Secondly, in terms of the LNG storage tank failure, the odds of one in every 15,000 years are apparently based upon an analysis prepared by SES, which has not been provided to the parties and has never been subject to discovery or cross-examination in a hearing. Thirdly, this is theoretical and assumes that there would be no human errors in the design of the facilities, the understanding of the 27 active earthquake faults in the area, or the construction of the LNG import terminal.

Finally, this one-in-15,000 years claim overlooks all of the other LNG spills and NGL spills, to which an earthquake could contribute, such as: a 550,310 gallon or more spill if it happens when the LNG is being unloaded from the ship; a 75,000 gallon spill when the LNG is being transferred from the storage tanks to the vaporizer; NGLs on site being released and causing a fire or explosion; or LNG tanker trucks spilling LNG.

It is one thing to take a risk with the construction of a project in a high seismic area, where an error would not have widespread impacts or there is no alternative. However, in the case of SES's LNG import terminal, which could have such widespread and devastating impacts and could instead be sited away from population centers, there is no reason to take this risk. Havens Supp. at 24-25.

(2) The DPMPA would not provide adequate protection against oil and hazardous substance spills

The "Oil and hazardous substance spills" section of the CCA, Cal. Pub. Res. Code § 30232, provides: "Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any developments or transportation of materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur." For this section of the CCA, the POLB staff web comments at 8-9 asserts that the LNG terminal will comply with federal regulations concerning LNG that could

spill at a ten-minute spill rate, and refers to containment walls to ensure that the spilled product cannot leave the site.

As discussed above, SES's proposed LNG import terminal would not comply with minimum federal LNG safety regulations concerning spills of LNG at the proposed site, because even if it had a sufficient impoundment area, it would not have a sufficient vapor-gas dispersion exclusion zone if such a spill occurred. See 49 CFR §193.2059. Consequently, a spill while unloading the LNG, could go well beyond the proposed site and have more widespread impact than POLB staff assumed.

In addition, POLB staff cannot even point to anything in the DEIS/EIR or elsewhere which shows that there would be a sufficient exclusion zone for the ten-minute spill for a ship unloading line (aka "marine transfer line"). While the DEIS/EIR, Table 4.11.5-1 at page 4-139, lists the spill size for a "marine transfer line" as 550,310 gallons, the DEIS/EIR at page 4-142 inexplicably refers to a spill from a marine transfer line as only being 39,600 gallons with a design spill of 75,000 gallons. Havens' Supp.at 17. Because the LNG vapor cloud from a 75,000 gallon LNG spill would leave the LNG import terminal property, then obviously, a 550,000 gallon LNG spill would be flammable and spread over even a much greater distance.

POLB staff web comments do not claim that SES's proposal has complied with federal exclusion zone requirements for spills from the LNG ships. That is because there are none. Exhibit PUC-3 at 3. POLB staff web comments also never asserts what cleanup facilities exist for such spills either, and nothing in the DEIS/EIR specifies any cleanup facilities for spills in the water or on land. Yet, these are all requirements under state law for the terminal and the transportation. See Cal. Pub. Res. Code § 30232 ("Protection against the spillage … shall be provided in relation to any developments or *transportation* of materials. Effective containment and *cleanup facilities* and procedures shall be provided for accidental spills that do occur.")

(Emphasis added). Moreover, it has to be "effective" containment and cleanup in relation to the development or transportation. Therefore, complying with minimum federal regulations is not the same as this state law requirement. The California Coastal Act is a comprehensive scheme based upon findings that the California coast is a distinct and valuable resource, and its permanent protection is a paramount concern. *See Yost v. Thomas*, 36 Cal.3d 561, 565 (1984). The protection of the California coast was not left to the lowest common denominator throughout the nation.

In this regard, the phrase "in relation to" should be interpreted broadly. In light of the berths loading and unloading crude oil, gas, petroleum products and hazardous materials in close proximity to the proposed site, an LNG spill can cause a widespread fire in the area and a chain reaction with these other products, as well. Phelps Testimony at 2-3; 5-13. The flammable vapor cloud can become a flash fire over a distance beyond the site and a pool fire can result in a thermal flux level of 10,000 Btu/hr/ft^2, which can damage steel structures. Therefore, an LNG spill can result in further spills of oil and hazardous materials which would relate to the LNG spill. Havens' Supp. at 6-7; Phelps Testimony at 3-8. The DEIS/EIR, which underestimates the distances of most, if not all of the adverse impacts of an LNG fire, at least recognizes that oil production and BP/Arco's site are vulnerable and that these facilities could be damaged. DEIS/EIR at 5-1 through 5-15.

Under these circumstances, the Board should not approve the DPMPA, because it would be contrary to the CCA's provisions on oil and hazardous substance spills.

B. Siting SES's proposed LNG import terminal in the Port of Long Beach would be contrary to its risk management plan

The Port of Long Beach's Risk Management Plan (RMP) requires that the hazards of a proposed facility cannot impact "vulnerable resources" defined as residential, recreational, and visitor populations, and high-density Port working populations, critical regional facilities and

high value facilities. The POLB staff web comments at 24 attempt to justify the DPMPA's compliance with the RMP with the use of the thermal flux standard of 1600 Btu/hr/ft^2 to compute impacts.

As discussed above, residential, recreational, and visitor populations, and high-density Port working populations can be impacted and receive second degree burns from thermal flux levels below the 1600 Btu/hr/ft^2. There is scientific consensus that people exposed to a lower thermal flux level than 1600 Btu/hr/ft^2, but over a longer period of time than 30 seconds, could receive second-degree burns or worse. See Havens Testimony at 10-11; Exhibit PUC-7 at 30 (ABS citing FEMA). Either the POLB staff did not understand that people could feel intense pain and receive second degree burns at a further distance, or they assumed that everyone was capable of quickly running away within 30 seconds and would know exactly what to do. This latter assumption would effectively exclude from the "vulnerable" population, the most vulnerable people: senior citizens, the disabled and young children. It also is unreasonable to assume that in a densely populated area, everyone would know what to do.

The POLB staff web comments also did not consider that a spill of LNG could become a flammable vapor cloud, which could spread off the site and into areas of high-density Port working populations, residential neighborhoods, or Cesar Chavez Park before igniting and becoming a flash fire.

The POLB staff web comments at 17 also assumed that nobody in the vulnerable classes would be impacted, because they somehow concluded that the worst possible events that could happen in 10,000 years were a 60 second leak that ignites immediately, or a vessel collision at the breakwater. This is not based upon science or reality. In the last four years alone, there have been three LNG-related accidents that the POLB staff's assumption would ask us to believe could not take place in 10,000 years. First, there was an LNG fuel truck in Spain in 2002, which

was in an accident, caught on fire and then exploded into a fireball (i.e., a BLEVE), which severely burned two people. See Exhibit PUC-3 at 26-29. Havens Supp. at 22-23.

Secondly, on January 19, 2004, there was a vapor cloud, explosion and massive fire at an LNG export facility in Algeria, which killed 27 people and injured 56 others. See Phelps Supp., Exhibit D. Nowhere is this recent tragedy even considered in the theoretical statistical analysis.

Thirdly, on September 14, 2005 in Fernley, Nevada, there was an LNG fuel truck, which leaked LNG that later ignited into a fire, with heat so intense, that firemen and firewomen with protective gear evacuated the area to approximately ½ mile away, and "moved further back several times, finally staging approximately one mile from the scene." See Angelopulo Declaration, Exhibit PUC-12 at 8-9 (pp.6-7 on the bottom). This was likewise ignored in the DEIS/EIR, even though SES's LNG project would include filling on its site similar LNG tanker trucks' 10,000 gallon cargo tanks, and up to 16 tanker trucks per day would thereafter leave the Port and transport the cargo through metropolitan Los Angeles and elsewhere.

These accidents prove that human error alone can cause spills of LNG, and one mile distance may not be a safe enough distance. Havens Supp. at 24-25. The LNG tanker truck in Nevada had 10,000 gallons in its tank. A 10-minute spill from a ship unloading line at SES's proposed LNG import terminal could release 550,310 gallons, more than 55 times more LNG that the Fernley fire. DEIS/EIR at 4-138. That spill could happen just from human error, and federal regulations require exclusion zones for that type of spill. However, the SES's proposed LNG import terminal would not even comply with this minimum federal regulation. Havens Supp. at 16-18.

This is not even considering that earthquakes or terrorist attacks could also cause that 10-minute spill or even greater spills. Sandia National Laboratories found it was credible that a terrorist attack could cause 3 million gallons of LNG to spill with a possibility of even more if

there were a cascading effect on two more storage tanks on the ship. Exhibit PUC-3 at 4-5. For this reason, Dr. Havens recommends a three-mile minimum distance between an LNG import terminal and a densely populated area. Havens Testimony at 4.

The DEIS/EIR finds that a terrorist attack has only 7 in a million chances based upon past events, even though the DEIS/EIR at ES-14 states that historical experience provides little guidance in estimating the probability of a terrorist attack on an LNG vessel or onshore storage facility. Quest, which came up with this 7-in-1 million number, contradicts itself by noting it is impossible to predict the probability of occurrence of specific intentional events (such as those perpetrated by vandals or terrorists). DEIS/EIR, Appendix F at 3-9. So, how can there be reliance on any of Quest's statistical analyses for this project?

Based upon Dr. Havens' testimony and exhibits (Exhibits PUC-1 through PUC-10), including Sandia National Laboratories' report for the U. S. Department of Energy (Exhibit PUC-6), and the ABS Consulting study under contract with FERC (Exhibit PUC-7), there is no way that the Board could conclude that residential, recreational, and visitor populations, and high-density Port working populations could not be impacted from SES's proposed LNG import terminal.

By the same token, critical or high value facilities within the Port Long Beach or adjacent to it can be severely impacted by LNG spills. When considering the enormous volumes of LNG involved at an import terminal, such as the one proposed by SES, it makes no sense whatsoever to site it in a Port, which is already a potential target of terrorists, because it is so vital to the California and United States economy. It also violates the Port Long Beach's RMP, and, therefore, the Board should reject the draft Port Master Plan Amendment No. 20.

When human error alone makes this risk too large in light of how many people would be in harms' way (i.e., at least 130,000), the added risks of earthquakes or terrorist attacks makes

this site one of the worst possible sites imaginable. In light of the safer alternatives, which would not put the general public in harms' way, the Board should reject the DPMPA.

CONCLUSION

For the foregoing reasons, the FERC and the POLB should find that these Draft EIS and Draft EIR are inadequate and they should refuse to certify them or they should require new drafts be prepared for recirculation. In terms of the state law issues, the CPUC respectfully requests that the Board reject the draft Port Master Plan Amendment No. 20.

Dated: December 8, 2005

Respectfully submitted,

RANDOLPH L. WU
HARVEY Y. MORRIS
MICHAEL M. EDSON
PAUL ANGELOPULO

By: /s/ HARVEY Y. MORRIS
HARVEY Y. MORRIS

California Public Utilities Commission
505 Van Ness Avenue, Room 5138
San Francisco, California 94102
(415) 703-1086
hym@cpuc.ca.gov
Attorneys for the Public Utilities Commission of the State of California

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused the foregoing Comments of the Public Utilities Commission of the State of California re: Long Beach LNG Import Project Draft Environmental Impact Statement/Environmental Impact Report and Draft Port Master Plan Amendments No. 20 [Revised] to be served upon all known parties of record in this proceeding by mailing by first-class mail a copy thereof properly addressed to each party.

Executed in San Francisco, California, on December 8, 2005.

/s/ HARVEY Y. MORRIS
Harvey Y. Morris