6.0 RECOMMENDATIONS

6.1 SUMMARY OF THE FERC AND POLB STAFFS' ENVIRONMENTAL ANALYSIS

The recommendations presented in this section are those of the environmental staffs of the FERC and the POLB (Agency Staffs). These recommendations were developed with input from the ACOE and the Coast Guard as cooperating agencies in the preparation of this EIS/EIR. However, the ACOE and the responsible agencies participating in the CEQA review process will present their own recommendations as part of their permit decisions. The recommendations of the Coast Guard will be presented in its LOR.

The Agency Staffs will recommend that the project be determined by their respective Commissions to be an environmentally acceptable action if it is constructed and operated in accordance with applicable laws and regulations, SES' proposed mitigation (i.e., control measures), and the Agency Staffs' additional mitigation recommendations. This recommendation is based on a review of the information provided by SES and further developed from data requests; field investigations; scoping; literature research; alternatives analysis; and contacts with federal, state, and local agencies, and individual members of the public. Although many factors were considered in developing this recommendation, the principal reasons are:

- the LNG terminal would be located in a previously developed portion of the POLB and 100 percent of the routes of the pipelines and electric distribution facilities would cross heavily disturbed, industrialized areas associated with the POLB and surrounding areas;

- the LNG terminal generally conforms to the overall goals of the current PMP, local zoning ordinances, and relevant regional plans and would be consistent with existing surrounding uses. The POLB would obtain an amendment to its PMP because LNG is not an expressly identified "hazardous cargo" as permitted within Terminal Island Planning District 4. The certified PMP amendment would demonstrate consistency with the CCA;

- the pipeline and electric distribution facilities would be consistent with existing surrounding uses and conform to the overall goals of the current PMP, local zoning ordinances, and relevant regional plans;

- the project would be consistent with the RMP;

- the project facilities would be designed to meet the POLB's seismic design criteria and exceed the seismic design criteria of NFPA 59A and other applicable codes;

- SES would implement its SWPPP and HDD Plan to protect natural resources during construction and operation of the project;

- the appropriate consultations with the FWS, NOAA Fisheries, and the SHPO have determined that the project would not adversely affect special status species, would not have a significant impact on EFH, and would have no impact on cultural resources;

- the project would not have a significant impact on land transportation;

- SES would complete a full air quality analysis and identify any mitigation requirements necessary to allow the FERC to determine that the project conforms with the applicable SIP and AQMP;

- final design plans addressing the FERC's cryogenic design and technical review would be submitted for approval before construction;

- none of the events considered possible according to the LACFD criteria have the potential to produce radiant impacts that could affect the public outside of the industrial area defined by the POLB boundary line;

- SES would develop a WSA in consultation with the Coast Guard and state and local officials that would determine the appropriate safety and security measures to mitigate the risks while an LNG ship is operating in the VTS area;

- SES' development and implementation of an LNG Vessel Operation and Emergency Contingency Plan in consultation with the Coast Guard would ensure that ship traffic associated with the project would not cause significant vessel traffic congestion within the harbor and would not exceed the capacity for maritime commerce to operate efficiently and safely within the POLB;

- an LOR addressing the suitability of the POLB for LNG transport would be issued by the Coast Guard;

- consultations with the Coast Guard and other appropriate agencies to prepare the Facility Security Plan would be completed before commencement of service;

- consultations with local emergency planning groups, the ports of Long Beach and Los Angeles, fire departments, state and local law enforcement, the Coast Guard, and other appropriate federal agencies to develop an Emergency Response Plan would be completed before initial site preparation;

- SES would prepare a plan for funding all project-specific security/emergency management costs, including any necessary equipment and personnel base that would be imposed on state and local agencies as a result of the project, and would fund those costs; and

- an environmental inspection and mitigation monitoring program would ensure compliance with all mitigation measures that become conditions of authorization.

6.2 ALTERNATIVES CONSIDERED

The No Action or No Project Alternative was considered. While the No Action or No Project Alternative would eliminate the environmental impacts identified in this EIS/EIR, none of the objectives of the proposed project would be met. Specifically, SES would not be able to provide a new and stable supply of natural gas and LNG vehicle fuel to southern California. It is purely speculative to predict the actions that could be taken by other suppliers or users of natural gas and LNG in the region as well as the resulting effects of those actions. Because the demand for energy in southern California is predicted to increase, customers would likely have fewer and potentially more expensive options for obtaining natural gas and LNG supplies in the near future. This might lead to alternative proposals to develop natural gas

delivery or storage infrastructure, increased conservation or reduced use of natural gas, and/or the use of other sources of energy.

It is possible that the infrastructure currently supplying natural gas and LNG to the proposed market area could be developed in other ways unforeseen at this point. This might include constructing or expanding regional pipelines as well as LNG import and storage systems. Any construction or expansion work would result in specific environmental impacts that could be less than, similar to, or greater than those associated with the Long Beach LNG Import Project. Increased costs could potentially result in customers conserving or reducing use of natural gas. Although it is possible that additional conservation may have some effect on the demand for natural gas, conservation efforts are not expected to significantly reduce the long-term requirements for natural gas or effectively exert downward pressures on gas prices.

Denying SES' applications could force potential natural gas customers to seek regulatory approval to use other forms of energy. California regulators are promoting renewable energy programs to help reduce the demand for fossil fuels. While renewable energy programs can contribute as an energy source for electricity, they cannot at this time reliably replace the need for natural gas or provide sufficient energy to keep pace with demand.

Alternatives involving the use of other existing or proposed LNG or natural gas facilities to meet the stated objectives of the proposed project were evaluated. None of the pipeline system alternatives could provide a stable source of LNG for vehicle fuel or the storage of up to 320,000 cubic meters of LNG to address fluctuating energy supply and demand (two of the three stated objectives of the Long Beach LNG Import Project). Several of the proposed LNG import systems (either offshore California or in Mexico) could provide a new source of natural gas to southern California markets; however, none of these system alternatives could meet the proposed project's stated objective of providing a stable source of LNG for vehicle fuel. Furthermore, each of the system alternatives could result in its own set of significant environmental impacts that could be greater than those associated with the proposed project.

Alternative sites for an LNG import terminal were evaluated. The examination of alternative sites for an LNG import terminal involved a comprehensive, step-wise process that considered environmental, engineering, economic, safety, and regulatory factors. The alternative sites evaluated for an LNG terminal were not found to avoid or substantially lessen any significant environmental effects of the proposed project and/or could not meet all or most of the project objectives.

An evaluation of alternative routes for the natural gas and C_2 pipelines was also conducted. The alternatives were not found to avoid or substantially lessen impacts associated with the corresponding segment of the proposed routes and/or were infeasible due to the number of existing utilities already in place along the alignments and the lack of adequate space to install the facilities.

Reduced dredge/fill alternatives and alternative ship berth configurations, dredge disposal alternatives, and alternative dredging methods were evaluated to avoid or minimize impacts on water quality or biological resources associated with the in-water work needed for construction of the LNG ship berth and unloading facility and strengthening the shoreline structures. None of these alternatives were found to be feasible or would avoid or substantially lessen any significant environmental effects of the proposed project.

Vaporizer alternatives were also evaluated. The shell and tube vaporizer, which is the proposed vaporizer for the Long Beach LNG Import Project, was found to be efficient, readily able to be integrated with the NGL extraction system, and to utilize proven vaporizer technology. Shell and tube vaporizers are also the most compact LNG vaporizers available, an important consideration given the size of the LNG terminal site. New vaporization processes that primarily utilize air exchangers as a heat source were

also evaluated because they would have lower fuel gas requirements than conventional combustion vaporizers. Reduced fuel use would lead to a corresponding reduction in air emissions and operating costs. The space requirements of these new vaporization processes, however, appear to make this approach technically infeasible at the proposed site.

6.3 ENVIRONMENTALLY PREFERABLE/SUPERIOR ALTERNATIVE

The Agency Staffs will recommend to their respective Commissions that SES' proposed project is the environmentally preferable/superior alternative that can meet the project objectives.

6.4 UNAVOIDABLE SIGNIFICANT IMPACTS/STATEMENT OF OVERRIDING CONSIDERATIONS

Emissions (criteria air pollutants) from construction and operation of the proposed project would result in significant unavoidable adverse air quality impacts because control and mitigation measures would be unable to reduce air emissions to less than the SCAQMD significance thresholds and the predicted impacts from operational emissions would potentially worsen an existing violation of the ambient air quality standards for PM_{10} and $PM_{2.5}$. Construction impacts would, however, be temporary and intermittent and cease at the end of the construction phase.

Although the proposed project would not exceed cancer risk level significance thresholds established by the SCAQMD for toxic air pollutant health impacts, the SCAB and Port areas in particular are assumed, on the basis of the SCAQMD's MATES II Study, to suffer significant impacts related to toxic air pollutants and associated cancer risk levels. Therefore, toxic air pollutants resulting from the project would likely contribute to an existing cumulatively significant air quality impact in the SCAB.

Approval of the project would be subject to a Statement of Overriding Considerations under the CEQA due to these significant unavoidable impacts that would remain after mitigation is applied.

6.5 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The proposed project involves tradeoffs between long-term productivity and short-term uses of the environment. Construction activities would result in a number of temporary impacts that would cease upon completion of the construction phase. Such impacts include the temporary exposure of the fill materials on the affected portion of Terminal Island and the native soils along the pipeline routes to the effects of wind, rain, and runoff, which could cause erosion and sedimentation in the area; minor increases in turbidity as a result of dredging, excavation, or disposal of dredge materials; water quality impacts from storm water run-off and from potential spills, leaks, or accidental releases of hazardous substances; biological resources impacts from the destruction of benthic infauna resulting from dredging; and air quality impacts from increased emissions of criteria pollutants. The impacts on soils, water, and biological resources would be mitigable. The impacts on air quality would not be mitigable to a less than significant level.

The long-term benefits of the project include an increase in tax revenues and an increase in supplies of natural gas for domestic consumption.

6.6 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENT OF RESOURCES

Section 15126 of the CEQA Guidelines requires that EIRs address any significant irreversible environmental changes that would be involved in the proposed project should it be implemented. The

project would involve two types of resources: general industrial resources, including capital, labor, fuels, and construction materials; and project-specific resources, such as biological resources, water resources, and land uses.

The proposed project would require the irreversible and irretrievable commitment of fossil fuels, rock, concrete and gravel, capital, labor, and construction materials. Fossil fuels and energy would be consumed during construction and operation activities. Use of these energy resources would be irretrievable and irreversible. Materials such as the rock that would be required for reinforcement of the shoreline structures would also be irretrievably committed.

The primary project-specific resources irretrievably lost would include soils (resulting from water and wind erosion in disturbed areas), land use (the terminal and aboveground facilities and permanent rights-of-way for the pipelines would preclude the sites from future development), and visual resources (construction and operation of the LNG terminal facilities, the aboveground facilities associated with the pipelines, and the electric distribution facilities would permanently affect the viewshed).

Because the proposed project would provide a new and stable supply of natural gas and LNG vehicle fuel to southern California, the irreversible and irretrievable resource commitments are considered to be acceptable.

6.7 FERC AND POLB STAFFS' RECOMMENDED MITIGATION

If the FERC and the POLB approve the Long Beach LNG Import Project, the Agency Staffs recommend that the following measures be included as specific conditions of the Order and/or the Harbor Development Permit to further mitigate the environmental impact associated with the construction and operation of the proposed project.

FERC Staff's Recommended Measures

1. Sound Energy Solutions (SES) shall follow the construction procedures and mitigation measures described in its applications, supplemental filings (including responses to staff data requests), and as identified in the environmental impact statement/environmental impact report (EIS/EIR), unless modified by the Federal Energy Regulatory Commission (Commission or FERC) Order. SES must:

    a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);
    b. justify each modification relative to site-specific conditions;
    c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and
    d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification**.

2. For pipeline facilities, the Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:

    a. the modification of conditions of the FERC Order; and
    b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental

conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.

3. For liquefied natural gas (LNG) facilities, the Director of OEP has delegated authority to take all steps necessary to ensure the protection of life, health, property, and the environment during construction and operation of the project. This authority shall include:

   a. stop-work authority and authority to cease operation; and
   b. the design and implementation of any additional measures deemed necessary to assure continued compliance with the intent of the conditions of the FERC Order.

4. **Prior to any construction,** SES shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors (EIs), and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before becoming involved with construction and restoration activities.**

5. The authorized facility locations shall be as shown in the EIS/EIR, as supplemented by filed alignment sheets, and shall include the staff's recommended facility locations, if any. **As soon as they are available, and before the start of construction,** SES shall file with the Secretary revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for all facilities approved by the FERC Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

6. SES shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all route realignments or facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction** in or near that area.

   This requirement does not apply to extra workspace allowed by the Upland Erosion Control, Revegetation, and Maintenance Plan or minor field realignments per landowner needs and requirements that do not affect other landowners or sensitive environmental areas such as wetlands.

   Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

   a. implementation of cultural resources mitigation measures;
   b. implementation of endangered, threatened, or special concern species mitigation measures;
   c. recommendations by state regulatory authorities; and
   d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

7. **At least 60 days before the anticipated start of construction,** SES shall file an initial Implementation Plan with the Secretary for the review and written approval of the Director of OEP describing how SES will implement the mitigation measures required by the FERC Order. SES must file revisions to the plan as schedules change. The plan shall identify:

    a. how SES will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;
    b. the number of EIs assigned and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;
    c. company personnel, including EIs and contractors, who will receive copies of the appropriate materials;
    d. what training and instructions SES will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change), with the opportunity for OEP staff to participate in the training session(s);
    e. the company personnel (if known) and specific portion of SES's organization having responsibility for compliance;
    f. the procedures (including use of contract penalties) SES will follow if noncompliance occurs; and
    g. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:

        i. the completion of all required surveys and reports;
        ii. the mitigation training of onsite personnel;
        iii. the start of construction; and
        iv. the start and completion of restoration.

8. SES shall file updated status reports with the Secretary on a **biweekly** basis **until** all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

    a. the current construction status of each spread, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally sensitive areas;
    b. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the FERC and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);
    c. corrective actions implemented in response to all instances of noncompliance, and their cost;
    d. the effectiveness of all corrective actions implemented;
    e. a description of any landowner/resident complaints that may relate to compliance with the requirements of the FERC Order, and the measures taken to satisfy their concerns; and
    f. copies of any correspondence received by SES from other federal, state, or local permitting agencies concerning instances of noncompliance, and SES's response.

9. SES must receive written authorization from the Director of OEP **before commencing service** from the LNG terminal and the other components of the project. Such authorization will only be granted following a determination that the facilities have been constructed in accordance with

FERC approval and applicable standards, can be expected to operate safely as designed, and the rehabilitation and restoration of the pipeline right-of-way and other areas affected by the project are proceeding satisfactorily.

10. **Within 30 days of placing the certificated facilities in service,** SES shall file an affirmative statement with the Secretary, certified by a senior company official:

    a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or
    b. identifying which of the Order conditions SES has complied with or will comply with. This statement shall also identify any areas along the right-of-way where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

11. SES shall complete a full air quality analysis and identify any mitigation requirements necessary for a finding of conformity with the applicable State Implementation Plan and the Air Quality Management Plan. SES shall file documentation supporting conformity with the Secretary **before the end of the draft EIS/EIR comment period** for review and analysis in the final EIS/EIR.

12. SES shall provide **in its comments on the draft EIS/EIR, or in a separate document submitted at the same time**, evidence of its ability to exercise legal control over the activities that occur within the portions of the thermal radiation exclusion zones that fall outside the site property line that can be built upon.

    The following measures shall apply to the LNG terminal design and construction details. Information pertaining to these specific recommendations shall be filed with the Secretary for the review and written approval of the Director of OEP either: prior to initial site preparation; prior to construction of final design; prior to commissioning; or prior to commencement of service as specified in each recommendation below. This information shall be submitted a minimum of 30 days before approval to proceed is required.

13. A complete plan and list of the hazard detection equipment shall be filed **prior to initial site preparation**. The information shall include a list with the instrument tag number, type and location, alarm locations, and shutdown functions of the proposed hazard detection equipment. Plan drawings shall clearly show the location of all detection equipment.

14. **Prior to initial site preparation**, SES shall file a technical review of its facility design that:

    a. identifies all combustion/ventilation air intake equipment and the distance(s) to any possible hydrocarbon release (LNG, flammable refrigerants, flammable liquids, and flammable gases); and
    b. demonstrates that these areas would be adequately covered by hazard detection devices and indicates how these devices would isolate or shut down any combustion equipment whose continued operation could add to or sustain an emergency.

15. A complete plan and list of the fixed and wheeled dry-chemical, fire extinguishing, and high expansion foam hazard control equipment shall be filed **prior to initial site preparation**. The information shall include a list with the equipment tag number, type, size, equipment covered, and automatic and manual remote signals initiating discharge of the units. Plan drawings shall clearly show the planned location of all fixed and wheeled extinguishers.

16. The **final design** of the hazard detection equipment shall identify manufacturer and model.

17. The **final design** of the hazard detection equipment shall include redundancy and fault detection and fault alarm monitoring in all potentially hazardous areas and enclosures.

18. The **final design** of the hazard detection equipment shall provide flammable gas and ultraviolet/infrared hazard detectors with local instrument status indication as an additional safety feature.

19. The **final design** of the fixed and wheeled dry-chemical, fire extinguishing, and high expansion foam hazard control equipment shall identify manufacturer and model.

20. The **final design** shall include equipment and instrumentation for the measurement of translational and rotational movement of the inner vessel for use during and after cool down.

21. The **final design** shall include a minimum of three onsite seismic instruments that would have the capability of actuating an automatic plant-wide emergency shutdown in the event of seismic activity approaching the site Contingency Level Earthquake. SES shall specify the set point to be used.

22. In the **final design** all structures, besides the LNG storage tanks, shall be designed to withstand the effects of an Operating Basis Earthquake, as required by Title 49 Code of Federal Regulations Part 193 and National Fire Protection Association (NFPA) 59A (2001), and, further, the condition of these structures shall not adversely affect the stability and integrity of the tanks in the Safe Shutdown Earthquake event.

23. The **final design** shall include details of the LNG tank tilt settlement and differential settlement limits between each LNG tank and piping and procedures to be implemented in the event that limits are exceeded.

24. The **final design** shall include drawings and specifications of the piping support structure of the LNG storage tanks.

25. The **final design** shall include provisions to ensure that hot water circulation is operable at all times when LNG is present in the secondary LNG booster pump discharge piping or when the temperature in the LNG inlet channel to any vaporizer is below 35 degrees Fahrenheit.

26. The **final design** shall include detection instrumentation and shutdown procedures for vaporizer tube leak, shell side overpressure, or bursting disc failure.

27. The **final design** shall include provisions to drain the fractionation systems to safe locations.

28. The **final design** shall ensure that air gaps are installed downstream of all seals or isolations installed at the interface between a flammable fluid system and an electrical conduit or wiring system. Each air gap shall vent to a safe location and be equipped with a leak detection device that: would continuously monitor for the presence of a flammable fluid; would alarm the hazardous condition; and would shut down the appropriate systems.

29. The **final design** shall include a fire protection evaluation carried out in accordance with the requirements of NFPA 59A, Chapter 9.1.2.

30. The **final design** shall include details of the shutdown logic, including cause and effect lists for alarm and shut down.

31. The **final design** shall include emergency shutdown of equipment and systems activated by hazard detection devices for flammable gas, fire, cryogenic spills, and earthquake, when applicable.

32. The **final design** shall include procedures for offsite contractors' responsibilities, restrictions, limitations, and supervision of the contractors by SES staff.

33. Security personnel requirements prior to and during LNG vessel unloading shall be filed **prior to commissioning**.

34. An operation and maintenance manual and safety procedure manual shall be filed **prior to commissioning**.

35. Copies of the U.S. Coast Guard (Coast Guard)-approved Facility Security Plan and LNG Vessel Operation and Emergency Contingency Plan shall be filed **prior to commissioning**.

36. The contingency plan for failure of the outer LNG tank containment shall be filed **prior to commissioning**.

37. The final detailed drawings of the transfer line impoundment systems, including cross sections, shall be filed **prior to commissioning**.

38. A copy of the criteria for horizontal and rotational movement of the inner vessel for use during and after cool down shall be filed **prior to commissioning**.

39. The FERC staff and Coast Guard shall be notified of any proposed revisions to the security plan and physical security of the facility **prior to commencement of service**.

40. Progress on the construction of the LNG terminal shall be reported in **monthly** reports filed with the Secretary. Details shall include a summary of activities, problems encountered, and remedial actions taken. Problems of significant magnitude shall be reported to the FERC **within 24 hours**.

The following measures shall apply throughout the life of the facility:

41. The facility shall be subject to regular FERC staff technical reviews and site inspections on at least a **biennial** basis or more frequently as circumstances indicate. Prior to each FERC staff technical review and site inspection, SES shall respond to a specific data request including information relating to possible design and operating conditions that may have been imposed by other agencies or organizations. Up-to-date detailed piping and instrumentation diagrams reflecting facility modifications and provision of other pertinent information not included in the semi-annual reports described below, including facility events that have taken place since the previously submitted annual report, shall be submitted.

42. **Semi-annual** operational reports shall be filed with the Secretary to identify changes in facility design and operating conditions, abnormal operating experiences, activities (including ship arrivals, quantity and composition of imported LNG, vaporization quantities, boil-off/flash gas, etc.), and plant modifications including future plans and progress thereof. Abnormalities shall include, but not be limited to: unloading/shipping problems, potential hazardous conditions from

offsite vessels, storage tank stratification or rollover, geysering, storage tank pressure excursions, cold spots on the storage tanks, storage tank vibrations and/or vibrations in associated cryogenic piping, storage tank settlement, significant equipment or instrumentation malfunctions or failures, non-scheduled maintenance or repair (and reasons therefore), relative movement of storage tank inner vessels, vapor or liquid releases, fires involving natural gas and/or from other sources, negative pressure (vacuum) within a storage tank, and higher than predicted boiloff rates. Adverse weather conditions and the effect on the facility also shall be reported. Reports shall be submitted **within 45 days** after each period ending **June 30 and December 31**. In addition to the above items, a section entitled "Significant plant modifications proposed for the next 12 months (dates)" also shall be included in the semi-annual operational reports. Such information would provide the FERC staff with early notice of anticipated future construction/maintenance projects at the LNG facility.

43. In the event the temperature of any region of any secondary containment, including imbedded pipe supports, becomes less than the minimum specified operating temperature for the material, the Commission shall be notified **within 24 hours** and procedures for corrective action shall be specified.

44. Significant non-scheduled events, including safety-related incidents (i.e., LNG or natural gas releases, fires, explosions, mechanical failures, unusual over pressurization, and major injuries) and security-related incidents (i.e., attempts to enter site, suspicious activities) shall be reported to the FERC staff and the Coast Guard **within 24 hours**. In the event an abnormality is of significant magnitude to threaten public or employee safety, cause significant property damage, or interrupt service, notification shall be made **immediately**, without unduly interfering with any necessary or appropriate emergency repair, alarm, or other emergency procedure. This notification practice shall be incorporated into the LNG facility's emergency plan. Examples of reportable LNG-related incidents include:

    a. fire;
    b. explosion;
    c. estimated property damage of $50,000 or more;
    d. death or personal injury resulting in patient hospitalization;
    e. free flow of LNG for 5 minutes or more that results in pooling;
    f. unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability, structural integrity, or reliability of an LNG facility that contains, controls, or processes gas or LNG;
    g. any crack or other material defect that impairs the structural integrity or reliability of an LNG facility that contains, controls, or processes gas or LNG;
    h. any malfunction or operating error that causes the pressure of a pipeline or LNG facility that contains or processes gas or LNG to rise above its maximum allowable operating pressure (or working pressure for LNG facilities) plus the build-up allowed for operation of pressure limiting or control devices;
    i. a leak in an LNG facility that contains or processes gas or LNG that constitutes an emergency;
    j. inner tank leakage, ineffective insulation, or frost heave that impairs the structural integrity of an LNG storage tank;
    k. any safety-related condition that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20 percent reduction in operating pressure or shut down of operation of a pipeline or an LNG facility that contains or processes gas or LNG;

l. safety-related incidents to LNG vessels occurring at or en route to and from the LNG facility; or

m. an event that is significant in the judgment of the operator and/or management even though it did not meet the above criteria or the guidelines set forth in an LNG facility's incident management plan.

In the event of an incident, the Director of OEP has delegated authority to take whatever steps are necessary to ensure operational reliability and to protect human life, health, property, or the environment, including authority to direct the LNG facility to cease operations. Following the initial company notification, the FERC staff would determine the need for a separate follow-up report or follow up in the upcoming semi-annual operational report. All company follow-up reports shall include investigation results and recommendations to minimize a reoccurrence of the incident.

45. **Prior to the issuance of the final EIS**, SES shall submit a Preliminary and Follow-on Waterway Suitability Assessment (WSA) to the Captain of the Port Coast Guard Sector Los Angeles-Long Beach for review and validation and provide a copy to the FERC staff.

46. SES shall **annually** review its WSA for the project, update the assessment to reflect changing conditions, provide the updated assessment to the Captain of the Port Coast Guard Sector Los Angeles-Long Beach for review and validation, and provide a copy to the FERC staff.

FERC and POLB Staffs' Recommended Measures

47. SES shall revise its Horizontal Directional Drill Plan (HDD Plan) to describe the procedures that would be followed if an existing submerged pipeline is encountered during the horizontal directional drill operations. SES shall file the revised HDD Plan with the FERC and the POLB for the review and written approval of the Director of OEP and the POLB Director of Planning **before construction**.

48. SES shall require that the construction workforce work 6 a.m. to 2:30 p.m. instead of 7 a.m. to 3:30 p.m.

49. SES shall:

a. require all contractors to use ultra-low sulfur or California Air Resources Board-approved alternative diesel fuel in all diesel-powered equipment used onsite during construction; and

b. use alternative-fuel buses to transport workers to and from the temporary laydown and worker parking area.

50. SES shall conduct a noise survey to verify that the noise from the LNG terminal when operating at full capacity does not exceed a day-night sound level (L_{dn}) of 55 decibels of the A-weighted scale (dBA) at any nearby noise-sensitive areas (NSAs) or 70 dBA at the property boundary, and file the results of the noise survey with the FERC and the POLB **no later than 60 days** after placing the LNG terminal in service. If the noise attributable to the operation of the LNG terminal exceeds an L_{dn} of 55 dBA at any nearby NSA or 70 dBA at the property boundary, SES shall file a report on what changes are needed and shall install additional noise controls to meet these levels within 1 year. SES shall confirm compliance with the L_{dn} of 55 dBA at the nearby NSAs and 70 dBA at the property boundary requirements by filing a second noise survey with the FERC and the POLB **no later than 60 days** after it installs the additional noise controls.

51. **Concurrent with the submission of the Follow-on WSA to the FERC staff**, SES shall file its comprehensive plan identifying the mechanisms for funding all project-specific security/emergency management costs that would be imposed on state and local agencies with the FERC and the POLB for the review and written approval of the Director of OEP in consultation with the POLB Director of Planning.

52. SES shall provide a separate 24-hours-per-day security staff and coordinate with the Coast Guard to define the responsibilities of SES' security staff in supplementing other security personnel and in protecting the LNG ships and terminal.

53. SES shall develop emergency evacuation routes for the areas along the route of the LNG vessel transit in conjunction with the local emergency officials and file the routes with the FERC and the POLB for the review and written approval of the Director of OEP in consultation with the POLB Director of Planning **prior to initial site preparation**.

54. SES shall develop an Emergency Response Plan (including evacuation) and coordinate procedures with local emergency planning groups, the ports of Long Beach and Los Angeles, fire departments, state and local law enforcement, the Coast Guard, and other appropriate federal agencies. This plan shall include at a minimum:

    a. designated contacts with state and local emergency response agencies;
    b. scalable procedures for the prompt notification of appropriate local officials and emergency response agencies based on the level and severity of potential incidents;
    c. procedures for notifying residents, employees, and recreational users within areas of potential hazard;
    d. locations of permanent sirens and other warning devices; and
    e. an "emergency coordinator" on each LNG vessel to activate sirens and other warning devices.

    The Emergency Response Plan shall be filed with the FERC and the POLB for the review and written approval of the Director of OEP in consultation with the POLB Director of Planning **prior to initial site preparation.** SES shall notify the FERC and POLB staffs of all planning meetings in advance and shall report progress on the development of its Emergency Response Plan at 3-month intervals.