Summary of Comments Received During the First Consultation for the Liquefied Natural Gas (LNG) Facilities EHS Guideline

GENERAL

- This Guideline is very out of date and needs a significant update to align it with the 2012 IFC Performance Standards.
- It would be more appropriate for items related to LNG shipping/LNG carriers to be addressed in the Guideline for Shipping and the Guideline for Ports, Harbors and Terminals, respectively.

IMPACT ON AQUATIC AND SHORELINE ENVIRONMENT

- LNG carriers are required to manage their (segregated) ballast water in a manner that is compliant with MARPOL requirements; as such, the risk of introducing invasive species during loading and unloading operations is very remote.

HAZARDOUS MATERIALS MANAGEMENT

- Spills: It is recommended that the bulleted list of "spill guidelines" be replaced with a sentence stating that the design of a LNG facility needs to be in accordance with applicable host-country regulatory requirements and international standards/guidelines that address the production, storage, and handling of LNG such as NFPA 59A and EN 1473.

WASTEWATER DISCHARGES

- Cooling water: For LNG liquefaction plants, fin-fan cooling is used as appropriate and for some closed systems is the most cost-effective approach—this also serves as a means of conserving water resources (or other heat exchange fluids). However, for other applications that require large and/or quick thermal exchanges, there is little economic substitute for cooling water towers. Liquefaction plants, by the nature of the geography of gas resources, tend to not have other industry around to integrate heat or cold energy resources. For regasification facilities, immediately adjacent heat resources may be able to be evaluated, but most distant sources would be uneconomic to consider.

FIRE AND EXPLOSIONS

- Blast walls are not typically effective onshore to separate process areas from other areas of a facility. Instead, buildings are designed to provide a desired level of blast protection depending upon potential exposures and building occupancy or functionality. Therefore, suggest deleting footnote 21.
CHEMICAL HAZARDS

- For H₂S, a Short-Term Exposure Limit of 15 ppmv and a Threshold Limit Value (8-hour period) of 10 ppmv (equivalent to 14 mg/m³) are common standards in the upstream petroleum industry. In addition, NIOSH studies cite 10 ppmv as the threshold that can cause eye irritation upon extended exposure and 100 ppm as the IDLH. Therefore, mandating an alarm level of 7 mg/m³ that is half the short-term exposure limit is inappropriately aggressive and would likely lead to needless alarms and facility disruptions. It is suggested to raise the alarm activation threshold.

EMISSION AND EFFLUENT GUIDELINES

- **Hydro test water:**
  - The advocated 10 mg/L oil and grease standard in Table 1 is extreme, represents the most stringent regulatory standard, and in some instances/locations, not attainable even using best-available cost-appropriate technology. A reference to a specific analytical protocol is required.
  - When seawater is used for hydro testing purposes (and is discharged to the sea following the test), the limits for chlorides appearing in the Table are inappropriate. Accordingly, a statement needs to be made that the chloride limits only apply when fresh water is used for hydro testing.

- **Storm water:** Recommend to reword as “hydrocarbon-contaminated storm water drainage.” The advocated 10 mg/L oil and grease standard is extreme, represents the most stringent regulatory standard, and in some instances/locations, not attainable even using best-available cost-appropriate technology—therefore it is inappropriate to apply this extreme limit globally.

- **Cooling water:** What is the rationale for the 100m boundary of the mixing zone? Could it just as easily be 200m or 500 m? Wouldn’t it be better to define the measuring point as that location where a particularly sensitive receptor is located?

- **Effluent levels for LNG facilities:** The given limit for chlorides will affect cases where there is some desalination system for process water production as the reject from desalination can easily exceed the chloride limit, even with relatively pure raw water.

- **Table 2:** A wider range of values for LNG transportation is warranted recognizing the large range of LNG carrier sizes.