

ALASKA LNG PROJECT	DOCKET No. CP17-__-000 RESOURCE REPORT No. 9 APPENDIX H – PROJECT NSPS, NESHAPS AND RMP APPLICABILITY ANALYSIS	USAI-PE-SRREG-00-000009-000 DATE: APRIL 14, 2017 REVISION: 0
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APPENDIX H PROJECT NSPS, NESHAPs, and RMP APPLICABILITY ANALYSIS

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1.0 NEW SOURCE PERFORMANCE STANDARDS (NSPS)

Pursuant to Section 111 of the CAA, EPA promulgates NSPS, codified in 40 C.F.R. Part 60, for certain newly constructed, modified, or reconstructed sources of emissions of criteria pollutants. These standards are based on best demonstrated technology for air pollution control of specified equipment and may be expressed as numerical emission limits, performance standards, or work practices. Subpart A of Part 60 establishes general provisions for sources subject to the various NSPS subparts, including general performance testing, monitoring, notification, reporting, and recordkeeping requirements.

A preliminary analysis of NSPS that may apply to the proposed Project facilities is provided below. Final applicability determinations would be made based on final facility design. Table 1 provides a summary of the NSPS categories under 40 C.F.R. 60 that are potentially applicable to emission units included in the Project.

NSPS Subpart	Applicability		
	Liquefaction Facility	Compressor and Heater Stations	GTP
Subpart A – General Provisions	Yes	Yes	Yes
Subpart Da – Electric Utility Steam Generation Units	No	No	No
Subpart Db – Industrial, Commercial, and Institutional Steam Generating Units	No	No	Yes
Subpart Dc – Small Industrial, Commercial, and Institutional Steam Generating Units	No	Yes	No
Subpart Kb – Volatile Organic Liquid Storage Vessels	TBD	No	TBD
Subpart CCCC – Commercial and Industrial Solid Waste Incineration Units	No	Yes	No
Subpart IIII – Stationary Compression Ignition Internal Combustion Engines	Yes	No	Yes
Subpart JJJJ – Stationary Spark Ignition Internal Combustion Engines	No	Yes	No
Subpart KKKK – Stationary Combustion Turbines	Yes	Yes	Yes
Subpart OOOOa – Standards for Performance for Crude Oil and Natural Gas Facilities	Yes	Yes	Yes

1.1 LIQUEFACTION FACILITY

The Liquefaction Facility would be subject to the flare design and operating requirements of Subpart A for any flares that serve as a control device to comply with the applicable requirements of other NSPS-regulated units. Subpart A restricts visible emissions from flares and requires the documentation of design data to ensure proper flare operation. Final applicability determinations for the flares would be made based on final facility design.

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NSPS Subpart Da, Standards of Performance for Electric Utility Steam Generating Units, applies to electric utility steam generating units with a heat input capacity greater than 250 MMBtu/hr and for which construction, reconstruction, or modification commenced after September 18, 1978. The Liquefaction Facility would not include any steam generating units constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW net electrical output to any utility power distribution for sale and, as such, would not be subject to the requirements of Subpart Da.

NSPS Subparts Db and Dc regulate emissions from industrial, commercial, and institutional steam generating units, and may apply to the emission units at the facility if gas-fired steam generating units (or units that heat other liquids such as oil or glycol for process operations) are included in the facility design.

NSPS Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, applies to stationary source steam generating units with a heat input capacity greater than 100 MMBtu/hr and for which construction, reconstruction, or modification commenced after June 19, 1984. A steam generating unit is defined in Subpart Db as a device that combusts any fuel or byproduct/waste and produces steam or heats water or heats any heat transfer medium. Subpart Db does not apply to process heaters, which are devices primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst. The current facility design plan does not include any steam generating units with a heat input capacity greater than 100 MMBtu/hr and, as such, would not be subject to the requirements of Subpart Db. NSPS Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applies to stationary steam generating units, as defined in 40 C.F.R. 60.41c, with a heat input capacity less than 100 MMBtu/hr and greater than 10 MMBtu/hr and for which construction, reconstruction, or modification commenced after June 9, 1989. The current facility design plan does not include any steam generating units with a heat input capacity greater than 10 MMBtu/hr and less than 100 MMBtu/hr, each.

NSPS Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced After July 23, 1984, applies to owners and operators of storage vessels constructed, reconstructed, or modified after July 23, 1984 with a capacity greater than or equal to 75 cubic meters (m³) (19,813 U.S. gallons) and used to store a volatile organic liquid, which is any organic liquid that can emit VOCs, as defined in 40 C.F.R. 51.100, into the atmosphere. Subpart Kb does not apply to storage vessels with a capacity greater than or equal to 75 m³ (19,813 U.S. gallons) but less than 151 m³ (39,890 U.S. gallons) and used to store a liquid with a maximum true vapor pressure less than 15.0 kilopascals (kPa) (2.2 pounds per square inch [absolute] (psia)). Subpart Kb also does not apply to storage vessels with a capacity greater than or equal to 151 m³ (39,890 U.S. gallons) used to store a volatile organic liquid with a maximum true vapor pressure less than 3.5 kPa (0.51 psia). Additionally, the following storage vessels are exempt from Subpart Kb per 40 C.F.R. 60.110b(d):

- Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere;
- Storage vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships; and
- Storage vessels with a design capacity less than or equal to 1,589.874 m³ (420,000 U.S. gallons) used for petroleum or condensate stored, processed or treated prior to custody transfer. Custody transfer is defined in 40 C.F.R. 60.111b as the transfer of produced petroleum and/or condensate,

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after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

The Liquefaction Facility is anticipated to include various storage tanks including:

- LNG storage tanks;
- Hydrocarbon condensate storage tanks;
- Diesel fuel oil tanks;
- Propane refrigerant tanks; and
- Ethane storage tanks.

The current facility design plan includes two LNG storage tanks with a capacity of approximately 240,000 m³ (63,000,000 U.S. gallons), each, but because the true vapor pressure of the VOC components of LNG when maintained at storage temperature (-260 °F) would be less than 3.5 kPa, the LNG storage tanks would be exempt from Subpart Kb.

Approximately 175 m³ (46,230 gallons) per day of condensate would be removed from the natural gas stream by the liquefaction process and stored in a condensation storage tank. This tank would be used to store condensate processed or treated prior to custody transfer, as defined in 40 C.F.R. 60.111b, and as such, would be exempt from Subpart Kb if the capacity of the condensate storage tank is less than 1,589.875 m³ (420,000 gallons).

Diesel fuel storage tanks at the Liquefaction facility would range in size from 200 to 280 m³ (55,000 to 75,000 gallons), each, but because the maximum true vapor pressure of diesel is much less than 3.5 kPa, the diesel storage tanks would be exempt from Subpart Kb.

The propane and ethane storage tanks planned for the Liquefaction Facility would be pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere. As a result, these storage vessels would be exempt from Subpart Kb.

The capacities of other storage tanks and the expected composition of the volatile organic liquid contents that would be stored at the Liquefaction Facility have not yet been determined. Final applicability determinations would be made for all storage tanks at the Liquefaction Facility based on the final facility design.

NSPS Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, applies to owners and operators of stationary compression ignition internal combustion engines (CI ICE) that commence construction after July 11, 2005 where the stationary CI ICE are either manufactured after April 1, 2006 and are not fire pump engines or manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006. Subpart IIII emission standards for stationary CI ICE are based on the engine rating, cylinder displacement, model year, and whether or not the CI ICE is an emergency engine, as defined under 40 C.F.R. 60.4211(f). All stationary CI ICE installed and

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operated at the Liquefaction Facility that are subject to Subpart IIII would be required to burn ultra-low sulfur diesel (ULSD).

The preliminary design plan for the Liquefaction Facility includes the following potentially affected engines:

- One non-emergency engine air compressor drive rated for a maximum power output of approximately 300 horsepower, and
- One firewater pump engine rated for a maximum power output of approximately 575 horsepower (429 kW), each.

Each of these units must be designed to meet the applicable Subpart IIII emission limits. Under 40 C.F.R. 60.4209(a), the fire pump CI ICE would require the installation of a non-resettable hour meter prior to startup if the engine does not meet the emission standards in Subpart IIII that are applicable to non-emergency engines. Additionally, the fire pump CI ICE would be required to be in compliance with the non-vacated portions of the operating and maintenance procedures specified in 40 C.F.R. 60.4211(f).

NSPS Subpart JJJJ, Standards of Performance for Stationary Spark Injection Internal Combustion Engines, applies to stationary spark ignition internal combustion engines (SI ICE) for which construction, modification, or reconstruction commenced after June 12, 2006. Currently, the Project plan does not include SI ICE at the Liquefaction Facility. If any stationary SI ICE are installed at the Liquefaction Facility and subject to Subpart JJJJ, then the stationary SI ICE would be required to meet the NO_x, CO, and VOC emission limits in Table 1 of Subpart JJJJ per 40 C.F.R. 60.4233(e).

NSPS Subpart KKKK, Standards of Performance for Stationary Combustion Turbines, applies to stationary combustion turbines, including any associated duct burners, with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour and for which construction, modification, or reconstruction commenced after February 18, 2005. As a result, Subpart KKKK applies to all of the combustion turbines proposed for the Liquefaction Facility. The preliminary Project plan includes six gas-fired simple cycle combustion turbines for compressor mechanical drives and four gas-fired combined cycle turbines for power generation at the Liquefaction Facility. The associated emissions from a combined turbine and heat recovery steam generator are subject to the Subpart KKKK NO_x and SO₂ emission requirements. Each new gas-fired turbine is expected to be equipped with DLN/DLE emission controls and would be capable of achieving the applicable Subpart KKKK NO_x emission limits. Additionally, the new combustion turbines at the Liquefaction Facility would burn fuel gas with a sulfur content no greater than 3 ppmv S, resulting in SO₂ emissions well below the SO₂ limits in Subpart KKKK.

- NSPS Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015, establishes emission standards and compliance schedules for the control of SO₂, VOC, and greenhouse gases (GHG) in the form of a limitation on emissions of methane from affected facilities in the crude oil and natural gas source category. Subpart OOOOa would apply to certain components of the Liquefaction Facility that include:
 - Each centrifugal compressor using wet seals;

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- Each single continuous bleed natural gas-driven pneumatic controller;
- Storage vessels, as defined in 40 C.F.R. 60.4530a, with potential VOC emissions equal to or greater than 6 tons per year;
- Each pneumatic pump that is a natural gas-driven diaphragm pump; and
- The group of all equipment, except compressors, within a process unit. The definition of a process unit in 40 C.F.R. 60.5430a includes components assembled for the fractionation of liquids into natural gas products, or other operations associated with the processing of natural gas products.

Owners and operators of centrifugal compressors using wet seals subject to Subpart OOOOa must reduce methane and VOC emissions from each centrifugal compressor wet seal fluid degassing system by 95.0 percent. If a control device, such as a flare or thermal oxidizer, is used to reduce emissions, then the wet seal fluid degassing system must be equipped with a cover and closed vent system that meet the operating and design requirements in Subpart OOOOa and must be routed to a control device meeting the specifications in Subpart OOOOa. The closed vent system can be routed to a process as an alternative to routing the closed vent system to a control device.

Under Subpart OOOOa, each continuous bleed natural gas-driven pneumatic controller at a natural gas processing plant must have a bleed rate of zero. Subpart OOOOa requires that such pneumatic controllers at a natural gas processing plant be tagged with the month and year of installation, reconstruction, or modification and identification information that allows traceability to the records for that pneumatic controller.

Under Subpart OOOOa, each pneumatic pump that is a natural gas-driven diaphragm pump operating at the Liquefaction Facility must have a natural gas emission rate equal to zero.

Certain monitoring, recordkeeping and reporting requirements and VOC emission standards are applicable to storage vessels subject to Subpart OOOOa. Exceptions to Subpart OOOOa applicability exist for storage vessels subject to and controlled in accordance with the requirements for storage vessels in Subpart Kb or 40 C.F.R. Part 63 Subparts G, CC, HH, or WW. The following vessels are not storage vessels subject to regulation under Subpart OOOOa:

- Storage vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days.
- Process vessels such as surge control vessels, bottoms receivers or knockout vessels; and
- Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

The Liquefaction Facility processing equipment, except compressors, subject to Subpart OOOOa must meet the equipment leak GHG and VOC standards in 40 C.F.R. 60.5400, which cross-reference equipment leak standards in Subpart VVa, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic

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Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After November 7, 2006.

Subpart OOOOa notification, reporting, and recordkeeping requirements are outlined in 40 C.F.R. 60.5420. In addition, 40 C.F.R. 60.5421a and 40 C.F.R. 60.5422a contain recordkeeping requirements and reporting requirements, respectively, for equipment at onshore natural gas processing plants subject to the equipment leak standards in Subpart OOOOa, which include semiannual reporting requirements.

1.2 INTERDEPENDENT PROJECT FACILITIES

1.2.2 Compressor and Heater Stations

NSPS Subpart Da, Standards of Performance for Electric Utility Steam Generating Units, applies to electric utility steam generating units with a heat input capacity greater than 250 MMBtu/hr and for which construction, reconstruction, or modification commenced after September 18, 1978. The compressor stations and heater stations would not include any steam generating units constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW net electrical output to any utility power distribution for sale. As a result, the compressor stations and heater stations would not include any equipment subject to the requirements of Subpart Da. NSPS Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, applies to stationary source boilers with a heat input capacity greater than 100 MMBtu/hr and for which construction, reconstruction, or modification commenced after June 19, 1984. At this time, the compressor stations and heater stations would not include any steam generating units with a heat input capacity greater than 100 MMBtu/hr and, as such, would not be subject to the requirements of Subpart Db.

NSPS Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applies to stationary source boilers with a heat input capacity less than 100 MMBtu/hr and greater than 10 MMBtu/hr and for which construction, reconstruction, or modification commenced after June 9, 1989. All of the compressor stations are planned to include a number of natural gas-fired auxiliary glycol heaters rated for a maximum heat input capacity of approximately 3 MMBtu/hr, each. Because each of these units would have a maximum heat input capacity less than 10 MMBtu/hr, these units would not be subject to the requirements of Subpart Dc.

One compressor station and the heater stations are planned to include a set of five and nine indirect-fired gas heaters, respectively, each heater rated for a maximum heat input capacity of approximately 28 MMBtu/hr. Each unit is expected to meet the definition of a steam generating device, per 40 C.F.R. 60.41c, and would be subject to monitoring, recordkeeping, and notification requirements but not the SO₂ and PM emission standards specified in Subpart Dc.

NSPS Subpart CCCC, Standards of Performance for Commercial and Industrial Solid Waste Incineration (CISWI) Units, applies to owners and operators of CISWI units that are constructed after June 4, 2010 or reconstructed or modified after August 7, 2013, and which meet all of the requirements specified in 40 C.F.R. 60.2010. The compressor stations and heater station would include a CISWI unit that is expected to meet the definition of a CISWI unit subject to Subpart CCCC in 40 C.F.R. 60.2265 and would not be exempt under 40 C.F.R. 60.2020. Per Subpart CCCC, a preconstruction siting analysis and waste management plan would be submitted to EPA prior to commencing construction of each CISWI unit. Commencing construction is defined by EPA as entering into an agreement to purchase a CISWI unit,

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among other actions. Subpart CCCC also requires proper operating training and qualification, emission and operating limits, performance testing and compliance monitoring, and recordkeeping and reporting requirements upon startup of each CISWI unit.

NSPS Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, applies to owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are either manufactured after April 1, 2006 and are not fire pump engines or manufactured as a certified NFPA fire pump engine after July 1, 2006. At this time, the Project plan does not include stationary CI ICE at any of the compressor stations and heater stations.

NSPS Subpart JJJJ, Standards of Performance for Stationary Spark Injection Internal Combustion Engines, applies to stationary SI ICE for which construction, modification, or reconstruction commenced after June 12, 2006. The compressor stations and heater station are planned to include SI ICE, which would be required to meet the NO_x, CO, and VOC emission limits in Table 1 of Subpart JJJJ.

NSPS Subpart KKKK, Standards of Performance for Stationary Combustion Turbines, applies to stationary combustion turbines, including any associated duct burners, with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour and for which construction, modification, or reconstruction after February 18, 2005. Each compressor station is planned to include gas-fired combustion turbines for compressor mechanical drives, each of which would have a maximum heat input at peak load (HHV) greater than 50 MMBtu/hr and less than 850 MMBtu/hr and, as such, Subpart KKKK applies to all of the combustion turbines proposed for the compressor stations. Each new gas-fired turbine is expected to be equipped with DLN/DLE emission controls and would be capable of achieving the applicable Subpart KKKK NO_x emission limits. Additionally, the new combustion turbines at the compressor stations would burn fuel gas with a sulfur content no greater than or equal to 3 ppmv S, resulting in SO₂ emissions well below the SO₂ limits in Subpart KKKK.

Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015 would apply to;

- Each centrifugal compressor using wet seals;
- Each single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 standard cubic feet per hour (scfh);
- Storage vessels, as defined in 40 C.F.R. 60.4530a, with potential VOC emissions equal to or greater than 6 tons per year; and
- The collection of fugitive emissions components, as defined in 40 C.F.R. 60.5430a, at the compressor station.

The equipment and collection of fugitive emissions components at the compressor stations and heater stations would be subject to the monitoring, recordkeeping, and reporting requirements in Subpart OOOOa.

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1.2.3 Meter Stations

Information needed to make an adequate regulatory applicability determination for equipment that would be installed and operated at the meter stations is not yet available. Final applicability determinations would be made for the meter stations based on final facility design.

1.2.4 GTP

The GTP would be subject to the flare design and operating requirements of Subpart A for any flare that serves as a control device to comply with the applicable requirements for NSPS-regulated units. Subpart A restricts visible emissions from flares and requires the documentation of design data to ensure proper flare operation.

NSPS Subpart Da, Standards of Performance for Electric Utility Steam Generating Units, applies to electric utility steam generating units with a heat input capacity greater than 250 MMBtu/hr and for which construction, reconstruction, or modification commenced after September 18, 1978. The GTP would not include any steam generating units constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW net electrical output to any utility power distribution for sale and as such would not be subject to the requirements of Subpart Da.

NSPS Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, applies to stationary source steam generating units with a heat input capacity greater than 100 MMBtu/hr and for which construction, reconstruction, or modification commenced after June 19, 1984. The preliminary design plan for the GTP includes three natural gas-fired utility heaters with a heat input of approximately 225 MMBtu/hr, each. These heaters are anticipated to be subject to the monitoring, recordkeeping, and reporting requirements and NO_x emission limits in Subpart Db. Because the planned units would fire only natural gas, each unit would be exempt from the SO₂ and PM emission limits specified in Subpart Db.

NSPS Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applies to stationary steam generating units, as defined in 40 C.F.R. 60.41c, with a heat input capacity less than 100 MMBtu/hr and greater than 10 MMBtu/hr and for which construction, reconstruction, or modification commenced after June 9, 1989. The current GTP design plan does not include any steam generating units with a heat input capacity greater than 10 MMBtu/hr and less than 100 MMBtu/hr, each.

NSPS Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced After July 23, 1984, applies to owners and operators of storage vessels constructed, reconstructed, or modified after July 23, 1984 with a capacity greater than or equal to 75 m³ (19,813 U.S. gallons) and used to store a volatile organic liquid, which is any organic liquid that can emit VOCs, as defined in 40 C.F.R. 51.100, into the atmosphere. Subpart Kb does not apply to storage vessels with a capacity greater than or equal to 75 m³ (19,813 U.S. gallons) but less than 151 m³ (39,890 U.S. gallons) and used to store a liquid with a maximum true vapor pressure less than 15.0 kilopascals (kPa) (2.2 pounds per square inch [absolute] (psia)). Subpart Kb also does not apply to storage vessels with a capacity greater than or equal to 151 m³ (39,890 U.S. gallons) used to store a volatile organic liquid with a maximum true vapor pressure less than 3.5 kPa (0.51 psia). Additionally, the following storage vessels are exempt from Subpart Kb per 40 C.F.R. 60.110b(d):

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- Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere;
- Storage vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships; and
- Storage vessels with a design capacity less than or equal to 1,589.874 m³ (420,000 U.S. gallons) used for petroleum or condensate stored, processed or treated prior to custody transfer. Custody transfer is defined in 40 C.F.R. 60.111b as the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

The current GTP design plan includes a number of fuel system storage tanks that would each have a capacity less than 75 m³ (19,813 gallons) and, as such, would not be subject to Subpart Kb. The current GTP design plan also includes a triethylene glycol (TEG) storage tank with a design capacity of 100 m³ (26,500 gallons). Because TEG has a vapor pressure much less than 15.0 kPa, the TEG storage tank would not be subject to Subpart Kb.

The capacities of other storage tanks and the expected composition of the volatile organic liquid contents that would be stored at the GTP have not yet been determined. Final applicability determinations would be made for all storage tanks based on final facility design.

NSPS Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, applies to owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are manufactured after April 1, 2006 and are not fire pump engines or manufactured as a certified NFPA fire pump engine after July 1, 2006. All stationary CI ICE installed and operated at the GTP that are subject to Subpart IIII would be required to burn ULSD.

The preliminary design plan for the GTP includes:

- One non-emergency stationary CI ICE power generator rated for a maximum power output of approximately 2,500 kW and a displacement less than 10 liters per cylinder,
- One non-emergency stationary CI ICE power generator rated for a maximum power output of approximately 150 kW and a displacement less than 10 liters per cylinder,
- Three fire water pumps CI ICE that would be rated for a maximum power output of approximately 250 horsepower each and have a displacement less than 10 liters per cylinder, and
- One emergency stationary CI ICE that would be rated for a maximum power output of approximately 250 kW and have a displacement less than 10 liters per cylinder.

Each of these units must be designed to meet the applicable Subpart IIII emission limits. The emergency CI ICE is expected to be required to be in compliance with the operating and maintenance procedures specified in 40 C.F.R. 60.4211(f) and the emission limits in 40 C.F.R. 60.4205(b). Under 40 C.F.R. 60.4209(a), the three fire pump CI ICE would require the installation of a non-resettable hour meter prior

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to startup for any unit that does not meet the emission standards in Subpart IIII that are applicable to non-emergency engines.

NSPS Subpart JJJJ, Standards of Performance for Stationary Spark Injection Internal Combustion Engines, applies to stationary spark ignition internal combustion engines (SI ICE) for which construction, modification, or reconstruction commenced after June 12, 2006. Currently, the Project plan does not include SI ICE at the GTP. If any stationary SI ICE are installed at the GTP and subject to Subpart JJJJ, then the stationary SI ICE would be required to meet the NO_x, CO, and VOC emission limits in Table 1 of Subpart JJJJ per 40 C.F.R. 60.4233(e).

NSPS Subpart KKKK, Standards of Performance for Stationary Combustion Turbines, applies to stationary combustion turbines, including any associated duct burners, with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour and for which construction, modification, or reconstruction after February 18, 2005. As a result, Subpart KKKK applies to all of the combustion turbines proposed for the GTP. The preliminary GTP design plan includes eighteen gas-fired turbines for power generation and for compressor mechanical drives. Each new gas-fired turbine is expected to be equipped with DLN emission controls and would be capable of achieving the applicable Subpart KKKK NO_x emission limits. The sulfur content of the fuel gas burned in the new combustion turbines at the GTP would be low, resulting in SO₂ emissions well below the SO₂ limits in Subpart KKKK.

NSPS Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Facilities, applies to certain components of onshore natural gas processing plants that commence construction, modification, or reconstruction after September 18, 2015. The components of the GTP that may be subject to Subpart OOOOa include:

- Each centrifugal compressor using wet seals;
- Each single continuous bleed natural gas-driven pneumatic controller;
- Storage vessels, as defined in 40 C.F.R. 60.4530, with potential VOC emissions equal to or greater than 6 tons per year;
- Sweetening units;
- Each natural gas-driven diaphragm pump; and
- The group of all equipment, except compressors, within a process unit, which is defined as components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products.

Under Subpart OOOOa, each continuous bleed natural gas-driven pneumatic controller at a natural gas processing plant must have a bleed rate of zero. Subpart OOOOa requires that such pneumatic controllers be tagged with the year and month of installation, reconstruction, or modification and identification information that allows traceability to the records for that pneumatic controller.

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Monitoring, recordkeeping and reporting requirements, and VOC emission standards for storage vessels subject to Subpart OOOOa are included at 40 C.F.R. 60.5395a. Subpart OOOOa does not apply to storage vessels subject to and controlled in accordance with the requirements for storage vessels in Subpart Kb or 40 C.F.R. Part 63 Subparts G, CC, HH, or WW.

The GTP processing unit equipment, except compressors, subject to Subpart OOOOa must meet the equipment leak standards in 40 C.F.R. 60.5400a, which cross-reference equipment leak standards in Subpart VVa, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After November 7, 2006.

Sweetening units installed and operated at the GTP would be subject to the SO₂ emission reduction efficiency standards under 40 C.F.R. 60.5405a, the performance test method standards under 40 C.F.R. 60.4506a, and monitoring requirements under 40 C.F.R. 60.5407a if the sweetening units have a design capacity greater than 2 long tons per day (LT/day) of hydrogen sulfide (H₂S) in the acid gas (expressed as sulfur), per 40 C.F.R. 60.5365(g)(3). Sweetening facilities producing acid gas that is completely re-injected into oil-or-gas-bearing geologic strata or that is otherwise not released to the atmosphere are not subject to the SO₂ emission and monitoring standards, initial and continuous compliance standards, and recordkeeping and reporting requirements for sweetening units in Subpart OOOOa.

Subpart OOOOa notification, reporting, and recordkeeping requirements are outlined in 40 C.F.R. 60.5420a. Additional recordkeeping requirements and reporting requirements are included at 40 C.F.R. 60.5421a and 40 C.F.R. 60.5422a, respectively, for equipment at onshore natural gas processing plants subject to the equipment leak standards in Subpart OOOOa, which include semiannual reporting requirements.

2.0 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)

The 1970 CAA required that EPA develop health risk-based standards for regulating hazardous air pollutant (HAP) emissions. These regulations are codified in 40 C.F.R. Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAPs) and apply to specific pollutants and source categories. The Project is not one of the source categories regulated under 40 C.F.R. Part 61 and, as such, the requirements of 40 C.F.R. 61 would not apply to the Project.

The 1990 CAA Amendments expanded the EPA obligation to regulate HAPs and required EPA to set technology-based standards for a larger list of HAPs and for many more source categories. These NESHAPs are codified in 40 C.F.R. Part 63, also referred to as maximum achievable control technology (MACT) standards, and regulate HAP emissions from major sources of HAPs and area sources of HAPs within specific source categories. Part 63 defines a major source of HAPs as any stationary source or group of stationary sources located within a contiguous area and under common control that has the potential to emit more than 10 tons per year (tpy) of any single HAP or more than 25 tpy of all HAPs combined. Part 63 defines an area source of HAPs as any stationary source of HAPs that is not a major source of HAPs. Preliminary HAPs emission calculations indicate that the Liquefaction Facility and the GTP are each anticipated to have the potential to emit a single HAP, formaldehyde, at a rate greater than 10 tpy. As a result, these facilities are expected to be major sources of HAPs. The compressor stations, heater stations,

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and metering station potential to emit total HAPs and any single HAP would be below the 25 tpy and 10 tpy thresholds, respectively, and would be classified as area sources of HAPs.

Subpart A of Part 63 provides the general provisions for sources subject to the various MACT standards, which includes monitoring, notification, and reporting requirements for sources subject to certain subparts within 40 C.F.R. Part 63. Each subpart provides a table identifying which general provisions apply to that subpart. A preliminary analysis of MACT standards in 40 C.F.R. Part 63 that may apply to the proposed Project facilities is provided below and summarized in Table 2. Final applicability determinations would be made based on final facility design.

NESHAPs Subpart	Applicability		
	Liquefaction Facility	Compressor and Heater Stations	GTP
Subpart A – General Provisions	Yes	Yes	Yes
Subpart Y – National Emission Standards for Marine Tank Vessel Loading Operations	No	No	No
Subpart EEE – NESHAPs from Hazardous Waste Combustors	No	TBD	No
Subpart EEEE – NESHAPs for Organic Liquids Distribution (Non-Gasoline)	TBD	No	TBD
Subpart H – Organic HAPs for Equipment Leaks	TBD	TBD	TBD
Subpart HH – NESHAPs for Oil and Natural Gas Production Facilities	TBD	No	TBD
Subpart HHH – NESHAPs for Natural Gas Transmission and Storage Facilities	No	No	Yes
Subpart YYYY – NESHAPs for Stationary Combustion Turbines	Yes	No	Yes
Subpart ZZZZ – NESHAPs for Stationary Reciprocating Internal Combustion Engines	Yes	Yes	Yes
Subpart DDDDD – NESHAPs for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	No	No	Yes
Subpart JJJJJ – NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources	No	No	No

2.1 LIQUEFACTION FACILITY

The Liquefaction Facility would be subject to the flare design and operating requirements of Subpart A for the flares if the flares serve as a control device to comply with the applicable requirements of other NESHAPs-regulated units. Subpart A restricts visible emissions from flares and requires the documentation of design data to ensure proper flare operation. Final applicability determinations for the flares would be made based on final facility design.

Subpart Y, National Emission Standards for Marine Tank Vessel Loading Operations, applies to new major sources of HAPs with marine tank vessel loading operations, which are defined in 40 C.F.R. 63.561 as any

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operation under which a commodity is bulk loaded onto a marine tank vessel from a terminal. The Liquefaction Facility marine terminal loading berths would be located more than 0.81 km (0.5 miles) from the shore and meet the criteria of an offshore loading terminal in Subpart Y. The marine terminal would not be a new major source offshore loading terminal because the potential HAP emissions exclusively from the marine terminal would be less than 10 tons per year (tpy) of any single HAP and less than 25 tpy of all HAPs combined. As a result, Subpart Y would not apply to the marine terminal.

Subpart EEEE, National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline), establishes emission limits, operating limits, and work practice standards for organic HAPs emitted from organic liquid distribution (OLD) operations at major sources of HAPs. Per 40 C.F.R. 63.2334(b), OLD operations at facilities subject to Subpart HH and Subpart HHH are not subject to Subpart EEEE. Subpart EEEE applies to the collection of activities and equipment used to distribute organic liquids, as defined in 40 C.F.R. 63.2406, including:

- Storage tanks storing organic liquids;
- Transfer racks at which organic liquids are loaded into or unloaded out of transport vehicles and/or containers;
- Equipment leak components in organic liquids service that are associated with storage tanks and equipment subject to Subpart EEEE;
- Transport vehicles while the vehicles are loading or unloading organic liquids at transfer racks subject to Subpart EEEE; and
- Containers while the containers are loading or unloading organic liquids at transfer racks subject to Subpart EEEE.

Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components that are part of an affected source under another subpart of 40 C.F.R. 63 are exempt from Subpart EEEE. A final applicability determination for Subpart EEEE will be made based on final facility design.

Subpart H, National Emission Standards for Organic HAPs for Equipment Leaks, applies to certain equipment within a source subject to the provisions of a specific subpart in 40 C.F.R. 63 that references Subpart H. For affected equipment, Subpart H includes equipment design requirements as well as leak detection and repair for pumps, compressors, agitators, pressure-relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed-vent systems required by Subpart H that are intended to operate in organic HAP service 300 hours or more during the calendar year.

Organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least five percent by weight of total organic HAPs on an annual basis (40 C.F.R. 63.161). This definition may apply to equipment that handles hydrocarbon condensates if the hydrocarbon condensates contain concentrated amounts of organic HAPs such as hexane. The possibility exists that no equipment at the Liquefaction Facility would trigger Subpart H applicability. A final applicability determination for Subpart H would be made once detailed information about the composition of the hydrocarbon condensates anticipated at the Liquefaction Facility becomes available.

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Subpart HH, NESHAPs for Oil and Natural Gas Production Facilities, applies to facilities that process, upgrade, or store either natural gas or hydrocarbon liquids. At facilities that are major sources of HAPs, Subpart HH applies to glycol dehydration units, storage vessels with the potential for flash emissions, and the group of all ancillary equipment intended to operate in volatile HAP service at natural gas processing plants. Per 40 C.F.R. 63.761, in volatile HAP service means that a piece of ancillary equipment or compressor either contains or contacts a fluid (liquid or gas) which has a total volatile HAP concentration equal to or greater than 10 percent by weight. Ancillary equipment and compressors that are subject to Subpart H and Subpart HH would only be required to comply with the requirements of Subpart H.

The storage vessel standards in Subpart HH apply to any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio (GOR) equal to or greater than 0.31 m³ per liter (L) and an API gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters (21,000 gallons) per day. The Subpart HH storage vessel standards do not apply to storage vessels subject to 40 C.F.R. 60 Subpart Kb. An applicability determination for Subpart HH would be made based on the final Liquefaction Facility design.

Subpart HHH, NESHAP for Natural Gas Transmission and Storage Facilities, applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user (if there is no local distribution company), and that are major sources of HAPs. Equipment types subject to Subpart HHH are new and existing glycol dehydration units at the natural gas transmission and storage facility and any affected glycol dehydration unit would be subject to emission control requirements in 40 C.F.R. 63.1275 and monitoring, recordkeeping and reporting requirements specified in 40 C.F.R. 63.1283 through 1285. Per 40 C.F.R. 63.1270(c), a facility that does not include any glycol dehydration units specified in 40 C.F.R. 63.1270(b) is not subject to Subpart HHH. The current Liquefaction Facility design plan does not include any glycol dehydration units so Subpart HHH would not be applicable.

Subpart YYYY, NESHAPs for Stationary Combustion Turbines, applies to existing, new, or reconstructed stationary combustion turbines at major stationary sources of HAPs. The preliminary Project plan includes six gas-fired simple cycle combustion turbines for compressor mechanical drives and four gas-fired combined cycle turbines for power generation at the Liquefaction Facility. On August 18, 2004, EPA stayed the combustion turbine NESHAP for natural gas-fired turbines. As a result, the new combustion turbines at the Liquefaction Facility would be subject to the initial notification requirements in Subpart YYYY, but need not comply with any other requirement of Subpart YYYY until EPA takes final action to require compliance and publishes a document in the Federal Register (40 C.F.R. 63.6095(d)).

Subpart ZZZZ, NESHAPs for Stationary Reciprocating Internal Combustion Engines, applies to emissions from both spark-ignition and compression-ignition reciprocating internal combustion engines at area sources and major sources. The preliminary Liquefaction Facility plan includes the following potentially affected engines:

- One non-emergency engine air compressor drive rated for a maximum power output of approximately 300 horsepower, and
- One firewater pump engine rated for a maximum power output of approximately 575 horsepower (429 kW), each.

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Under Subpart ZZZZ, a new compression ignition stationary reciprocating ICE with a site rating of less than or equal to 500 brake horsepower located at a major source of HAPs emissions can demonstrate compliance with Subpart ZZZZ by demonstrating compliance with 40 C.F.R. 60, Subpart III. Per 40 C.F.R. 63.6590(b)(1), the firewater pump engine would not be required to meet the requirements in Subpart ZZZZ and of Subpart A, except for the information in the initial notification requirements outlined in 40 C.F.R. 63.6645(f). All stationary diesel-fired engines at the Liquefaction Facility would be required to burn ULSD.

Subpart DDDDD, NESHAPs for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, applies to boilers and process heaters at major sources of HAPs. The current facility design plan does not include any boilers and process heaters and, as such, would not be subject to the requirements of Subpart DDDDD.

2.2 INTERDEPENDENT PROJECT FACILITIES

2.2.2 Compressor Stations and Heater Stations

Subpart EEE, National Emission Standards for HAPs from Hazardous Waste Combustors, can apply to the incineration of hazardous waste, as defined under 40 C.F.R. 261.3. The rule at 40 C.F.R. 261.4(b)(1) specifically excludes household waste, which includes any material (including garbage, trash and sanitary wastes in septic tanks) derived from households including crew quarters. The compressor stations and heater stations may include incinerators capable of burning hazardous waste. A final applicability determination would be made based on final facility design.

Subpart H, National Emission Standards for Organic HAPs for Equipment Leaks, applies to certain equipment within a source subject to the provisions of a specific subpart in 40 C.F.R. 63 that references Subpart H. Subpart H includes equipment design requirements as well as leak detection and repair requirements. Final applicability determinations to Subpart H would be made based on the final design of the compressor stations and heater station.

Subpart HH, NESHAPs from Oil and Natural Gas Production Facilities, applies to facilities that process, upgrade, or store either natural gas or hydrocarbon liquids. At facilities that are area sources of HAPs, Subpart HH applies to each triethylene glycol (TEG) dehydration unit. None of the compressor and heater stations are anticipated to include TEG units. As a result, Subpart HH would not be applicable.

Subpart HHH, NESHAP for Natural Gas Transmission and Storage Facilities, applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user (if there is no local distribution company), and that are major sources of HAPs. Because the compressor stations and heater stations would be area sources of HAPs, equipment in these facilities would not be subject to Subpart HHH.

Subpart YYYY, NESHAPs for Stationary Combustion Turbines, applies to existing, new, or reconstructed stationary combustion turbines at major stationary sources of HAPs. Subpart YYYY defines a major source of HAPs for oil and gas production facilities in terms of the HAPs emissions from each surface site, where the compressor stations would be considered individual surface sites. Pending further design specifications, the compressor stations are not likely to be major sources of HAPs, so Subpart YYYY would not apply to the turbines located at the compressor stations.

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Subpart ZZZZ, NESHAPs for Stationary Reciprocating Internal Combustion Engines, applies to emissions from both spark-ignition and compression-ignition reciprocating internal combustion engines at area sources and major sources of HAPs. The preliminary plan for the compressor stations and heater stations include spark-ignition reciprocating internal combustion engines. Because the engines would be located at area sources of HAPs, these engines would demonstrate compliance with the requirements of Subpart ZZZZ by complying with 40 C.F.R. 60, Subpart JJJJ.

Subpart JJJJJ, NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources, applies to industrial boilers located at an area source of HAPs. Gas-fired boilers are not subject to Subpart JJJJJ and, as such, Subpart JJJJJ would not apply to the boilers at any of the compressor stations and heater stations.

2.2.3 Meter Stations

Information needed to make an adequate regulatory applicability determination for equipment that would be installed and operated at the meter stations is not yet available and would be provided in a subsequent draft of this Resource Report.

2.2.4 GTP

The GTP would be subject to the flare design and operating requirements of Subpart A for the flares if the flares serve as a control device to comply with the applicable requirements of other NESHAPs-regulated units. Subpart A restricts visible emissions from flares and requires the documentation of design data to ensure proper flare operation.

Subpart EEEE, National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline), establishes emission limits, operating limits, and work practice standards for organic HAPs emitted from organic liquid distribution (OLD) operations at major sources of HAPs. Activities and equipment used to process, store or transfer organic liquids at facilities defined in Subpart HH and at facilities defined in Subpart HHH are exempt from Subpart EEEE. A final applicability determination for Subpart EEEE would be made based on final facility design.

Subpart H, National Emission Standards for Organic HAPs for Equipment Leaks, applies to certain equipment within a source, and in a service, subject to the provisions of a specific subpart in 40 C.F.R. 63 that references Subpart H. Subpart H includes equipment design requirements as well as leak detection and repair for equipment such as pumps, compressors, agitators, pressure-relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed-vent systems required by Subpart H that are intended to operate in organic HAP service 300 hours or more during the calendar year. The possibility exists that no equipment at the GTP would be subject to Subpart H. A final applicability determination to Subpart H would be made once detailed information about the composition of the hydrocarbon condensates anticipated at the GTP becomes available.

Subpart HH, NESHAPs from Oil and Natural Gas Production Facilities, applies to facilities that process, upgrade, or store either natural gas or hydrocarbon liquids. At facilities that are major sources of HAPs, Subpart HH applies to glycol dehydration units, storage vessels with the potential for flash emissions, and ancillary equipment intended to operate in volatile HAP service at natural gas processing plants. Ancillary equipment and compressors that are subject to Subpart H and Subpart HH would only be required to comply

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with the requirements of Subpart H. An applicability determination for Subpart HH would be made based on the final GTP design.

Subpart HHH, NESHAP for Natural Gas Transmission and Storage Facilities, applies to owners and operators of natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user (if there is no local distribution company), and that are major sources of HAPs. The equipment subject to Subpart HHH is new and existing glycol dehydration units at the natural gas transmission and storage facility. The preliminary GTP design plan includes three parallel treatment trains, each of which would include a glycol dehydration unit that would be subject to emission control requirements specified in 40 C.F.R. 63.1275 and monitoring, recordkeeping and reporting requirements specified in 40 C.F.R. 63.1283 through 1285.

Subpart YYYY, NESHAPs for Stationary Combustion Turbines, applies to existing, new, or reconstructed stationary combustion turbines at major stationary sources of HAPs. Because the new combustion turbines at the GTP would be located on the Alaska North Slope, these combustion turbines would be exempt from the requirements of Subpart YYYY except for initial notification requirements.

Subpart ZZZZ, NESHAPs for Stationary Reciprocating Internal Combustion Engines, applies to emissions from both spark-ignition and compression-ignition reciprocating internal combustion engines at area sources and major sources. Under Subpart ZZZZ, a new compression ignition stationary reciprocating ICE with a site rating of less than or equal to 500 horsepower located at a major source of HAPs can demonstrate compliance with Subpart ZZZZ by complying with 40 C.F.R. 60, Subpart IIII. All of the stationary compression ignition reciprocating internal combustion engines at the GTP are anticipated to have a maximum power output less than 500 horsepower with the exception of one non-emergency stationary engine expected to have a maximum power output of 2,500 kW (3,353 horsepower). That larger engine would be subject to the emission limits under Subpart ZZZZ. All stationary diesel-fired engines at the GTP would be required to burn ULSD.

Subpart DDDDD, NESHAPs for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, applies to boilers and process heaters at major sources of HAPs. The preliminary design plan for the GTP includes three natural gas-fired utility heaters with a maximum heat input of approximately 250 MMBtu/hr, each, which would be affected units under Subpart DDDDD. Because these units would combust only natural gas, the units would be exempt from the emission limits specified in Table 1 of Subpart DDDDD, but would be subject to the initial notification requirements in 40 C.F.R. 63.7545 and the work practice standards in 40 C.F.R. 63.7540(a), as cross-referenced in 40 C.F.R. 63.7500.

3.0 CHEMICAL ACCIDENT PREVENTION

Section 112(r) of the 1990 CAA Amendments requires the EPA to publish regulations and guidance for chemical accident prevention at facilities for substances that pose the greatest risk of harm from accidental releases. The chemical accident prevention provisions, also referred to as the Risk Management Program (RMP), are codified in 40 C.F.R. Part 68. The regulations include a list of regulated substances that include methane, propane, and ethylene. The regulation also includes threshold quantities (TQ) for determining applicability to stationary sources. If a stationary source stores, handles, or processes one or more regulated substances in a quantity equal to or greater than the TQ specified in Table 1 of 40 C.F.R. 68.130, the facility must prepare and submit a risk management plan to EPA.

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The RMP applies only to stationary sources and, as such, does not apply to transportation subject to oversight or regulation under 49 C.F.R. Parts 192 (Federal safety standards for transportation of natural and other gas by pipeline), 193 (Federal safety standards for liquefied natural gas facilities), or 195 (Federal safety standards for transportation of hazardous liquids by pipeline), or a state natural gas or hazardous liquid program for which the state has in effect a certification to the U.S. Department of Transportation under 49 U.S.C. 60105. Transportation containers used for storage not incident to transportation and transportation containers connected to equipment at a stationary source are part of the stationary source.

Per 40 C.F.R. Part 68.115(b)(2)(iii), prior to entry into a natural gas processing plant, regulated substances in naturally occurring hydrocarbon mixtures do not need to be considered when determining whether more than a TQ of a regulated substance is present at a stationary source. Naturally occurring hydrocarbon mixtures include any combination of the following: condensate, field gas, and produced water, each as defined in 40 C.F.R. 68.3. Per 40 C.F.R. 68.3, field gas is gas extracted from a production well before the gas enters a natural gas processing plant, which is any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both, classified as North American Industrial Classification System (NAICS) code 211112, previously Standard Industrial Classification (SIC) code 1321.

A preliminary RMP applicability analysis that may apply to the proposed Project facilities is provided below and summarized in Table 3. Final applicability determinations would be made based on final facility design.

TABLE 3 Preliminary RMP Applicability Summary			
40 C.F.R. Part 68 - Chemical Accident Prevention Provisions	Applicability		
	Liquefaction Facility	Compressor and Heater Stations	GTP
Subpart F – Regulated Substances for Accidental Release Prevention	No	No	Yes

Regardless of the applicability of 40 C.F.R. Part 68 to the Project facilities, the general duty clause in Section 112(r)(1) of the CAA Amendments would still apply. That requirement reads:

“The owners and operators of stationary sources producing, processing, handling or storing such substances have a general duty in the same manner and to the same extent as section 654, title 29 of United States Code [Occupational Safety and Health Act of 1970 (29 U.S.C. 654)] to identify hazards which may result from such releases using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.”

The Project facilities would be designed and maintained to meet the general duty provisions.

3.1 LIQUEFACTION FACILITY

The hydrocarbon refrigerants and natural gas components undergoing liquefaction at the Liquefaction Facility would be subject to regulation under 49 C.F.R. Part 193, Federal Safety Standards for Liquefied

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Natural Gas Facilities and, therefore, would not be considered for determining applicability to 40 C.F.R. Part 68. The Liquefaction Facility would not include the storage of any hazardous or flammable substances in excess of a TQ determined per 40 C.F.R. 68.115 and, as such, the Liquefaction Facility would not be subject to 40 C.F.R. Part 68.

3.2 INTERDEPENDENT PROJECT FACILITIES

3.2.2 Compressor Stations and Heater Stations

The compressor stations and heater stations would be subject to regulation under 49 C.F.R. Part 192, Federal Safety Standards for Transportation of Natural and Other Gas by Pipeline. No hazardous or flammable substances in excess of a TQ determined per 40 C.F.R. 68.115 would be stored at the compressor stations or heater stations. As a result, these facilities would not be subject to 40 C.F.R. Part 68.

3.2.3 Meter Stations

No hazardous or flammable substances in excess of a TQ determined per 40 C.F.R. 68.115 would be stored at the meter stations. The meter stations would be subject to regulation under 49 C.F.R. Part 192, Federal Safety Standards for Transportation of Natural and Other Gas by Pipeline. As such, the meter stations would not be subject to 40 C.F.R. Part 68.

3.2.4 GTP

The GTP would include the storage of propane refrigerant in an amount greater than 10,000 lbs., which exceeds a TQ determined per 40 C.F.R. 68.115. The propane refrigerant stored at the GTP and would not be subject to regulation under 49 C.F.R. 192, 193, or 195 and would not be considered a component of a naturally occurring hydrocarbon mixture, as defined in 40 C.F.R. 68.3. As a result, the GTP would be subject to the provisions of 40 C.F.R. Part 68 for the storage of propane refrigerant.

Methane, ethane and propane inventories in the natural gas that would be treated at the GTP would not be subject to the provisions of 40 C.F.R. Part 68 because these substances would be components of a naturally occurring hydrocarbon mixture, as defined in 40 C.F.R. 68.3, and would not be considered for determining RMP applicability per 40 C.F.R. 68.115(b)(2)(iii).