

U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
Special Permit Analysis and Findings

Special Permit Information:

Docket Number:	PHMSA-2018-0042
Requested By:	Golden Pass LNG Terminal LLC
Operator ID#:	32220
Original Date Requested:	April 2, 2018
Original Issuance Date:	June 3, 2019
Effective Dates:	June 3, 2019 to June 2, 2025
Code Section(s):	49 CFR 193.2603(a) and (b), 193.2607, 193.2609, 193.2619(c) and (e), 193.2631, and 193.2635(e)

Purpose:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) Office of Pipeline Safety (OPS)¹ provides this information to describe the facts of the subject special permit application submitted by Golden Pass LNG Terminal LLC (GPLNG), to discuss any relevant public comments received with respect to the application, to present the engineering/safety analysis of the special permit application, and to make findings regarding whether the requested special permit should be granted and if so under what conditions.

Liquefied Natural Gas (LNG) Facility Affected:

This special permit waives compliance for certain regulations from 49 Code of Federal Regulations (CFR) Part 193, Subpart G – Maintenance, for the GPLNG’s Liquefied Natural Gas Regasification Import Receiving Terminal (GPLNG Terminal) located on the Sabine Neches Waterway, in Jefferson County, Texas. The special permit waives the regulations in 49 CFR

¹ Throughout this special permit the usage of “PHMSA” or “PHMSA OPS” means the U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration Office of Pipeline Safety.

193.2603(a) and (b), 193.2607, 193.2609, 193.2619(c) and (e), 193.2631, and 193.2635(e), which specify the maintenance, inspection, and testing requirements for LNG facilities.

The GPLNG Terminal is located on the southern shore of the Sabine-Neches Waterway in Jefferson County, Texas, approximately ten (10) miles south of Port Arthur, Texas, and two (2) miles north of Sabine Pass, Texas. The GPLNG Terminal consists of two (2) berths, five (5) LNG storage tanks, and a regasification system. Since June 2012, though not in operation, the GPLNG Terminal has maintained a warmed state, where all LNG has been removed, but equipment remains in a state of readiness that includes methane vapor. On December 21, 2016, the Federal Energy Regulatory Commission issued an “Order Granting Authorizations Under Sections 3 and 7 of the Natural Gas Act” for GPLNG to site, construct and operate LNG export facilities. GPLNG will create a hydrocarbon-free environment in the GPLNG Terminal prior to construction of the new liquefaction/export project to maximize safety of the tie-in activities. Existing equipment at the GPLNG Terminal will be at ambient temperature, purged of all hydrocarbons, and displaced with nitrogen. In some cases, containment will be broken for modification. The main gas supply pipeline will be blinded off from the GPLNG Terminal. A hydrocarbon-free environment will allow new equipment/facilities to be interconnected to existing equipment and allow certain existing equipment to be modified under safer conditions. While the GPLNG Terminal is out of service and purged free of hazardous fluid,² GPLNG will be relieved from performing the maintenance, inspection, and testing activities required in 49 CFR 193.2603(a) and (b), 193.2607, 193.2609, 193.2619(c) and (e), 193.2631, and 193.2635(e) by implementing the conditions of this special permit. Prior to bringing the GPLNG Terminal back into service, GPLNG will carry out its recommissioning/restart plan, and PHMSA will perform inspections to verify that the LNG facility equipment and components are fully restored to their original and fully compliant functions. Appendix A (pages 7 and 8 of 24) shows the GPLNG Terminal site map.

PHMSA grants this special permit based on the findings set forth in the "Special Permit Analysis" and "Findings and Final Environmental Assessment and Finding of No Significant

² Hazardous fluid is defined in § 193.2007 as gas or hazardous liquid. Hazardous liquid is defined in § 193.2007 as LNG or a liquid that is flammable or toxic. There will be small quantities (1,000 gallons or less) of petroleum products (i.e., diesel, gasoline, motor/hydraulic oil) used for construction equipment at the GPLNG Terminal.

Impact" documents, which can be read in their entirety in Docket No. PHMSA-2018-0042 in the Federal Docket Management System (FDMS) located on the internet at www.regulations.gov.

Special Permit Request:

GPLNG submitted an application to PHMSA on April 2, 2018, and supplemental information on June 20, 2018, for a special permit seeking relief from the Federal Pipeline Safety Regulations in 49 CFR 193.2603(a) and (b), 193.2607, 193.2609, 193.2619(c) and (e), 193.2631, and 193.2635(e) for the GPLNG Terminal on the Sabine Neches Waterway, in Jefferson County, Texas. As requested, this special permit allows GPLNG to waive the maintenance requirements for foreign material, support systems, relief valves, control systems, and internal corrosion control and monitoring in 49 CFR 193.2603(a) and (b), 193.2607, 193.2609, 193.2619(c) and (e), 193.2631, and 193.2635(e) for the GPLNG Terminal only when the LNG facilities are purged free of hydrocarbon.

Public Notice:

On March 26, 2019, PHMSA posted a notice of this special permit request in the Federal Register (84 FR 11394). The Federal Register notice period ended on April 25, 2019. The request letter, Federal Register notice, and all other pertinent documents are available for review in Docket No. PHMSA-2018-0042 in the Federal Docket Management System (FDMS) located on the internet at www.Regulations.gov.

PHMSA did not receive any comments on the Federal Register docket concerning the granting of this special permit with conditions when implemented allow GPLNG to waive the maintenance, inspection, and testing activities required in 49 CFR 193.2603(a) and (b), 193.2607, 193.2609, 193.2619(c) and (e), 193.2631, and 193.2635(e).

PHMSA has reviewed this special permit application to ensure the special permit conditions address the safety standards for LNG facilities. PHMSA will inspect the GPLNG Terminal to verify that LNG facilities are completely free of hydrocarbon and displaced with nitrogen. The special permit will require GPLNG to ensure that all maintenance activities must be up-to-date prior to returning the out-of-service LNG equipment back into operational service, and additional tests must be conducted to ensure the long term integrity and reliability of the LNG facility

components. GPLNG must have monitoring procedures for a safe working environment and implement them on all GPLNG Terminal facilities being exposed to the atmosphere.

Analysis:

In preparation for interconnecting the existing GPLNG Terminal to the new export facilities, GPLNG will remove hydrocarbon from all LNG facilities and purge with nitrogen until construction of the export facilities are complete. Maintaining the GPLNG Terminal components (equipment), which are not used and free of hydrocarbon, would provide minimal if any safety benefit. Appendix B (pages 9 through 14 of 24) includes a table that provides the requested maintenance regulations and detailed justification for the variance while Appendix C (pages 15 through 24) includes the maintenance regulations that GPLNG will continue to perform at the GPLNG Terminal. Equipment purged of hydrocarbon must be recommissioned and restarted in full compliance with 49 CFR Part 193. PHMSA carefully designed a comprehensive set of conditions that GPLNG would be required to meet in order for the special permit to be granted. Among other things, the conditions include:

- 1) No later than 30 days after the issuance of this special permit, GPLNG must provide PHMSA the plan, drawings, schedule, and procedures for:
 - a. safely purging hydrocarbon from tanks, equipment, and piping in accordance with 49 CFR 193.2517 and American Gas Association's Purging Principles and Practices (incorporated by reference in 49 CFR 193.2013). The drawings should show that vent locations do not pose a risk to plant personnel, the public, and possible cascading damages to adjacent components;
 - b. placing all LNG facilities under a hydrocarbon-free stage and filled completely with nitrogen; and
 - c. inspection requirements for nitrogen filled components to ensure these components are maintained above atmospheric pressure.
- 2) No later than 30 days after the issuance of this special permit, GPLNG must provide PHMSA the procedures for continuously monitoring, with details of location and interval, for the LNG facility equipment that is atmospherically exposed (i.e. with "containment broken" for valve and pump replacement) during hot work activities.

- 3) Provide procedures and records upon request by PHMSA that demonstrate that GPLNG continues to comply with the regulations that are not waived by this special permit as specified in Appendix C.
- 4) No later than 60 days prior to introducing hazardous fluid into the GPLNG Terminal, GPLNG must provide PHMSA a list of components, with procedures and schedule, for inspecting and testing to ensure components meet the original function and integrity, manufacturer specifications, and all applicable requirements prescribed in 49 CFR 193.2303. All procedures must include these items:
 - a. the return to service criteria and action items for components that do not meet the procedure requirements. GPLNG must also provide records for the implementation and documentation of those procedures;
 - b. specification for additional tests, per equipment manufacturer's maintenance requirements, to ensure long term integrity and reliability of the components; and
 - c. non-destructive tests (NDT) and acceptance criteria to verify that piping and equipment, that will be exposed to the atmosphere, will maintain the designed minimum wall thickness.
- 5) All test records must be made available for PHMSA's review no later than 30 days after tests are completed.
- 6) No later than 30 days prior to returning any component to service, a senior executive officer, vice president or higher, of GPLNG must certify in writing that GPLNG meets all of the conditions required by this permit. GPLNG must send the certifications required with the completion date, compliance documentation summary, the required senior executive signature, and date of signature, to the PHMSA, OPS, Associate Administrator for Pipeline Safety, with copies to the Deputy Associate Administrator, Field Operations; Deputy Associate Administrator, Policy and Programs; Southwest Region Director; Director, Standards and Rulemaking Division; Director, Engineering and Research Division; and to the Federal Register Docket (PHMSA 2018-0042) at www.Regulations.gov.

Based upon the review of the submitted information and discussions with GPLNG, PHMSA grants the special permit with the requirement that GPLNG meets the special permit conditions

to ensure safety of the GPLNG Terminal during the hydrocarbon-free period and recommissioning of the existing equipment. PHMSA is imposing the special permit conditions to ensure that this grant will not be inconsistent with safety for LNG facilities used in the transportation of gas by pipeline.

Findings:

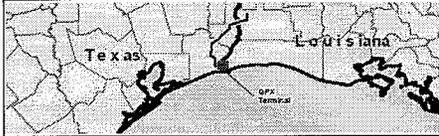
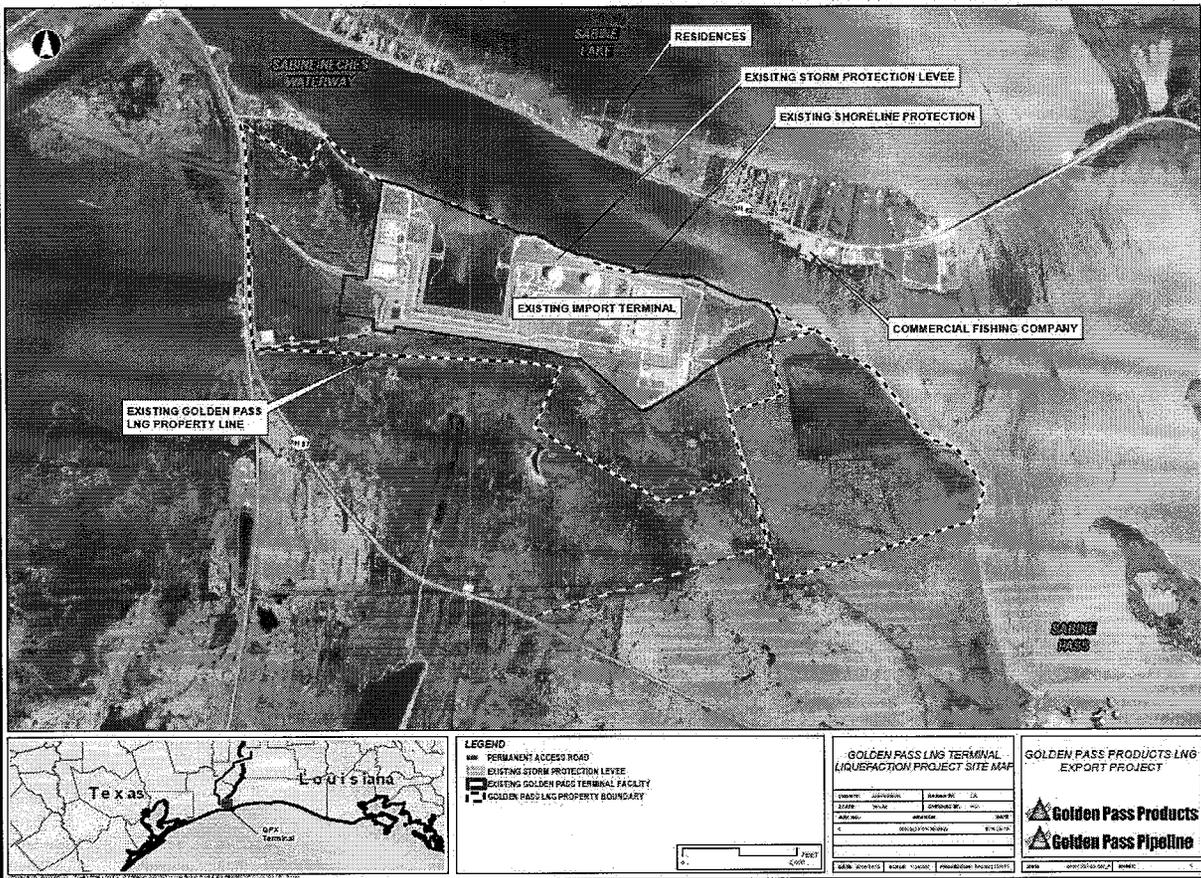
Based on the information submitted by GPLNG and PHMSA's analysis of the technical and safety issues, and given the special permit conditions that will be implemented, PHMSA finds that granting this special permit to GPLNG to waive the regulations in 49 CFR 193.2603(a) and (b), 193.2607, 193.2609, 193.2619(c) and (e), 193.2631, and 193.2635(e) is not inconsistent with LNG facilities safety.

Completed in Washington DC on: June 3, 2019

Prepared by: PHMSA OPS - Engineering and Research Division

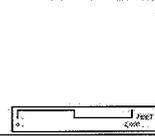
Appendix A – Golden Pass LNG Regasification Import Receiving Terminal

LIQUEFACTION PROJECT SITE MAP



LEGEND

- PERMANENT ACCESS ROAD
- EXISTING STORM PROTECTION LEVEE
- EXISTING GOLDEN PASS TERMINAL FACILITY
- GOLDEN PASS LNG PROPERTY BOUNDARY



GOLDEN PASS LNG TERMINAL LIQUEFACTION PROJECT SITE MAP

DATE:	10/15/2018	BY:	DA
SCALE:	1" = 100'	PROJECT NO.:	18-0042
REV. NO.:	001	DATE:	10/15/2018
BY:	DA	CHK'D BY:	DA

GOLDEN PASS PRODUCTS LNG EXPORT PROJECT

DATE: 10/15/2018 SCALE: 1"=100' DRAWING NO.: 18-0042-001

Appendix B – 49 CFR Part 193 Requirements Which GPLNG Seeks Relief

Appendix B - Specific 49 CFR Part 193 Requirements Which GPLNG Seeks Relief

REGULATION (for which waiver being requested)	REGULATION TEXT	Justification for Variance
<p>§ 193.2603 General.</p>	<p>(a) Each component in service, including its support system, must be maintained in a condition that is compatible with its operational or safety purpose by repair, replacement, or other means.</p> <p>(b) An operator may not place, return, or continue in service any component which is not maintained in accordance with this subpart.</p>	<p>Execution of 49 CFR 193.2603 (a) and (b) during the hydrocarbon free period would be ineffective and create unnecessary safety risk. Equipment maintenance is intended to ensure component reliability and safe facility operation. Maintaining components which are not being used for the purpose of safe facility operation would be ineffective. Additionally, all work, including component maintenance has inherent safety risks. GPLNG is committed to reducing risk to the lowest practical level. Cutting out unnecessary work increases efficiency and reduces the potential for injuries by preventing unnecessary work. As a condition of this Special Permit, GPLNG is required to submit to PHMSA proof that components meet Part 193 return to service criteria prior to introduction of hazardous fluid into the GPLNG Terminal. Prior to reinstating equipment in active service, a plan will be in place to inspect all equipment and components at the GPLNG Terminal and repair or replace the components which cannot achieve its original function or integrity, or do not meet company specification, industry standards, and government regulations. The plan will also include procedures which will guide Operators through the re-commissioning process. GPLNG will conduct additional tests to ensure long term integrity and reliability of the components as indicated in Section 4 Alternatives.</p> <p>49 CFR 193.2603 (a) and (b) will be met prior to the reintroduction of hazardous fluids into the equipment and components and as part of the pre-commissioning process. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p> <p>49 CFR 193.2603 in its entirety will be fully reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal.</p>

Appendix B - Specific 49 CFR Part 193 Requirements Which GPLNG Seeks Relief		
REGULATION (for which waiver being requested)	REGULATION TEXT	Justification for Variance
§ 193.2607 Foreign material.	<p>(a) The presence of foreign material, contaminants, or ice shall be avoided or controlled to maintain the operational safety of each component.</p> <p>(b) LNG plant grounds must be free from rubbish, debris, and other material which present a fire hazard. Grass areas on the LNG plant grounds must be maintained in a manner that does not present a fire hazard.</p>	<p>Execution of 49 CFR Part 193.2607(a) during the hydrocarbon free period would be ineffective and create unnecessary safety risk. During the hydrocarbon free period, there will be no ice from product lines or equipment as the facility will be non-operational with no hazardous fluids. Dust and potentially other similar foreign materials can be anticipated in and around non-operational equipment and components as part of the normal construction process from mobile equipment travel and other construction related work. Avoiding or controlling the presence of foreign materials is intended to help maintain the operational safety of components. Preventing the presence of foreign materials from components, which are not being used for the purpose of safe facility operation would be ineffective. Additionally, all work, including the work required to keep all components adequately sealed has inherent safety risks. GPLNG is committed to reducing risk to the lowest practical level. As a condition of this Special Permit, GPLNG is required to submit to PHMSA proof that components meet Part 193 return to service criteria before facility commissioning. Prior to reinstating equipment in active service, a plan will be in place to remove the presence of foreign material, contaminants, or ice to maintain the operational safety of each component. Additionally, GPLNG will maintain the LNG plant grounds free from rubbish, debris, and other material which present a fire hazard. All grass areas on the LNG plant ground must be maintained in a manner that does not present a fire hazard.</p>
§ 193.2609 Support systems.	<p>Each support system or foundation of each component must be inspected for any detrimental change that could impair support.</p>	<p>Execution of 49 CFR 193.2609 during the hydrocarbon free period would be ineffective and create unnecessary safety risk. Component support systems and foundations are intended to ensure components are safely supported during facility operation. Inspecting support systems, which are not being used for the purpose of safely supporting operational equipment would be ineffective. Additionally, all work, including support system inspection has inherent safety risks. Cutting out unnecessary work increases efficiency and reduces the potential for injuries by preventing unnecessary work. As a condition of this special permit, GPLNG is required to submit to PHMSA proof that components, including support systems, meet 49 CFR Part 193 return to service criteria prior to introduction of hazardous fluid into the GPLNG terminal. Prior to reinstating equipment in active service, a plan will be in place to inspect</p>

Appendix B - Specific 49 CFR Part 193 Requirements Which GPLNG Seeks Relief		
REGULATION (for which waiver being requested)	REGULATION TEXT	Justification for Variance
§ 193.2619 Control systems.	<p>(c) Control systems in service, but not normally in operation, such as relief valves and automatic shutdown devices, and control systems for internal shutoff valves for bottom penetration tanks must be inspected and tested once each calendar year, not exceeding 15 months, with the following exceptions:</p> <p>(1) Control systems used seasonally, such as for liquefaction or vaporization, must be inspected and tested before use each season.</p> <p>(2) Control systems that are intended for fire protection must be inspected and tested at regular intervals not to exceed 6 months.</p> <p>(e) Relief valves must be inspected and tested for verification of the valve seat lifting pressure and reseating</p>	<p>and repair all support systems that show any detrimental change that could impair support systems long-term integrity and reliability.</p> <p>Execution of 49 CFR 193.2619(c) and (e) during the hydrocarbon free period would be ineffective and create unnecessary safety risk. Control systems such as relief valves & automatic shutdown devices are intended to ensure safe facility operation. Inspecting and testing control systems, which are not being used for the purpose of safe facility operation would be ineffective. Additionally, all work, including control system inspection/testing has inherent safety risks. Cutting out unnecessary work increases efficiency and reduces the potential for injuries by preventing unnecessary work. As a condition of this Special Permit, GPLNG is required to submit to PHMSA proof that control system such as relief valves and automatic shutdown devices meet Part 193 return to service criteria prior to introduction of hazardous fluid in to the GPLNG Terminal. Prior to reinstating equipment in active service, a plan will be in place to inspect all control systems and repair or replace components which cannot achieve its original function or integrity, or do not meet company specification, industry standards, and government regulation. The testing of valves must account for the full range of operation based on manufacturer's specifications. GPLNG will conduct additional tests to ensure long term integrity and reliability of the control system as indicated in Section 4 Alternatives. The plan will also include procedures which will guide Operators through the re-commissioning process.</p> <p>49 CFR 193.2619 in its entirety, will be reinstated prior to the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>

Appendix B - Specific 49 CFR Part 193 Requirements Which GPLNG Seeks Relief		
REGULATION (for which waiver being requested)	REGULATION TEXT	Justification for Variance
§ 193.2631 Internal corrosion control.	<p>Each component that is subject to internal corrosive attack must be protected from internal corrosion by -</p> <p>(a) Material that has been designed and selected to resist the corrosive fluid involved; or</p> <p>(b) Suitable coating, inhibitor, or other means.</p>	<p>Internal corrosion protection is intended to protect components while the equipment and components are in operation. Installing corrosion resistant component material or coatings for equipment and components, which are not currently being used for hazardous fluid transfer in an operational facility would be ineffective. Equipment or components in the GPLNG Terminal could be temporarily exposed to the atmosphere while being modified or under replacement.</p> <p>As a condition of this Special Permit, GPLNG is required to submit to PHMSA proof that components, including internal corrosion protection, meets Part 193 return to service criteria prior to introduction of hazardous fluid into the GPLNG terminal. Prior to reinstating equipment in active service, a plan will be in place to inspect all equipment and components in the GPLNG Terminal and repair or replace components which cannot achieve its original function or integrity, or do not meet company specification, industry standards, and government regulations. The plan will also include procedures which will guide Operators through the re-commissioning process.</p> <p>49 CFR 193.2631 will be reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. GPLNG will undergo inspection for 49 CFR Part 193 and recommissioning plan compliance. GPLNG will conduct non-destructive tests (NDT) to verify that piping and equipment that will be exposed to the atmosphere, will maintain the designed minimum wall thickness. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>

Appendix B - Specific 49 CFR Part 193 Requirements Which GPLNG Seeks Relief

REGULATION (for which waiver being requested)	REGULATION TEXT	Justification for Variance
§ 193.2635 Monitoring corrosion control.	<p>(e) If a component is protected from internal corrosion, monitoring devices designed to detect internal corrosion, such as coupons or probes, must be located where corrosion is most likely to occur. However, monitoring is not required for corrosion resistant materials if the operator can demonstrate that the component will not be adversely affected by internal corrosion during its service life. Internal corrosion control monitoring devices must be checked at least two times each calendar year, but with intervals not exceeding 7 1/2 months</p>	<p>Monitoring for Internal corrosion and any subsequent maintenance is intended to protect components while the equipment and components are in operation. Monitoring internal corrosion & subsequent maintenance on equipment and components, which are not currently being used for hazardous fluid transfer in an operational facility would be ineffective. Equipment or components could be temporarily exposed to the atmosphere while being modified or under replacement.</p> <p>As a condition of this Special Permit, GPLNG is required to submit to PHMSA proof that components, including internal corrosion protection, meets Part 193 return to service criteria prior to introduction of hazardous fluid into the GPLNG Terminal. Prior to reinstating equipment in active service, a plan will be in place to inspect all equipment and components in the GPLNG Terminal and repair or replace components which cannot achieve its original function or integrity, or do not meet company specification, industry standards, and or government regulations. The plan will also include procedures which will guide Operators through the re-commissioning process. GPLNG will conduct adequate non-destructive tests (NDT) to verify that piping and equipment, that will be exposed to the atmosphere, will maintain the designed minimum wall thickness.</p>

**Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to
Perform**

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart G – Maintenance

REGULATION: 49 CFR PART 193	APPLICABLE REGULATION TEXT	SPECIFIC PORTION OF REGULATION TO BE FOLLOWED
<p>§ 193.2605 Maintenance procedures.</p>	<p>(a) Each operator shall determine and perform, consistent with generally accepted engineering practice, the periodic inspections or tests needed to meet the applicable requirements of this subpart and to verify that components meet the maintenance standards prescribed by this subpart.</p> <p>(b) Each operator shall follow one or more manuals of written procedures for the maintenance of each component, including any required corrosion control. The procedures must include</p> <p>(1) The details of the inspections or tests determined under paragraph (a) of this section and their frequency of performance; and</p> <p>(2) A description of other actions necessary to maintain the LNG plant according to the requirements of this subpart.</p> <p>(c) Each operator shall include in the manual required by paragraph (b) of this section instructions enabling personnel who perform operation and maintenance activities to recognize conditions that potentially may be safety-related conditions that are subject to the reporting requirements of 49 CFR 191.23 of this subchapter</p>	<p>49 CFR 193.2605 will be applicable to 49 CFR 193.2613, 193.2627, 193.2629, 193.2633 and 193.2635 during the special permit period and while the GPLNG Terminal is purged free of all hydrocarbons.</p> <p>49 CFR 193.2605 will be reinstated in its entirety prior to the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>
<p>§ 193.2613 Auxiliary power sources.</p>	<p>Each auxiliary power source must be tested monthly to check its operational capability and tested annually for capacity. The capacity test must take into account the power needed to start up and simultaneously</p>	<p>Repairs on Essential Generator will be made as necessary to ensure backup power source functionality.</p> <p>49 CFR 193.2613 will be reinstated in its entirety upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of</p>

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart G – Maintenance

REGULATION: 49 CFR PART 193	APPLICABLE REGULATION TEXT	SPECIFIC PORTION OF REGULATION TO BE FOLLOWED
§ 193.2619 Control systems.	<p>operate equipment that would have to be served by that power source in an emergency.</p> <p>(b) If a control system is out of service for 30 days or more, it must be inspected and tested for operational capability before returning it to service.</p>	<p>Hydrocarbons into the equipment and components in GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p> <p>Prior to the reintroduction of hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>
§ 193.2623 Inspecting LNG storage tanks	<p>Each LNG storage tank must be inspected or tested to verify that each of the following conditions does not impair the structural integrity or safety of the tank:</p> <p>(a) Foundation and tank movement during normal operation and after a major meteorological or geophysical disturbance.</p>	<p>49 CFR 193.2623(a) specifically related to foundation & tank movement after a major meteorological or geophysical disturbance.</p> <p>49 CFR 193.2623 in its entirety will be reinstated prior to the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>
§ 193.2625 Corrosion protection	<p>(b) Components whose integrity or reliability could be adversely affected by corrosion must be either -</p> <p>(1) Protected from corrosion in accordance with 49 CFR 193.2627 through 193.2635, as applicable; or</p> <p>(2) Inspected and replaced under a program of scheduled maintenance in accordance with procedures established under 49 CFR 193.2605</p>	<p>49 CFR 193.2625(b), as it applies to 193.2627, 193.2629, 193.2633 and 193.2635.</p> <p>49 CFR 193.2625 in its entirety will be reinstated prior to the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart G – Maintenance

REGULATION: 49 CFR PART 193	APPLICABLE REGULATION TEXT	SPECIFIC PORTION OF REGULATION TO BE FOLLOWED
§ 193.2627 Atmospheric corrosion control.	<p>Each exposed component that is subject to atmospheric corrosive attack must be protected from atmospheric corrosion by -</p> <p>(a) Material that has been designed and selected to resist the corrosive atmosphere involved; or</p> <p>(b) Suitable coating or jacketing</p>	<p>Components will be protected and maintained to 193.2627 (a) & (b) and in accordance with 193.2637.</p>
§ 193.2629 External corrosion control: buried or submerged components.	<p>(a) Each buried or submerged component that is subject to external corrosive attack must be protected from external corrosion by -</p> <p>(1) Material that has been designed and selected to resist the corrosive environment involved; or</p> <p>(2) The following means:</p> <p>(i) An external protective coating designed and installed to prevent corrosion attack and to meet the requirements of 49 CFR 192.461 of this chapter; and</p> <p>(ii) A cathodic protection system designed to protect components in their entirety in accordance with the requirements of 49 CFR 192.463 of this chapter and placed in operation before October 23, 1981, or within 1 year after the component is constructed or installed, whichever is later.</p> <p>(b) Where cathodic protection is applied, components that are electrically interconnected must be protected as a unit.</p>	<p>ALL</p>
§ 193.2633 Interference currents	<p>(a) Each component that is subject to electrical current interference must be protected by a continuing program to minimize the detrimental effects of currents.</p> <p>(b) Each cathodic protection system must be designed and installed so as to minimize any adverse effects it</p>	<p>ALL</p>

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart G – Maintenance

**REGULATION:
49 CFR PART 193**

APPLICABLE REGULATION TEXT

SPECIFIC PORTION OF REGULATION TO BE FOLLOWED

might cause to adjacent metal components.

(c) Each impressed current power source must be installed and maintained to prevent adverse interference with communications and control systems.

§ 193.2635 Monitoring corrosion control.

Corrosion protection provided as required by this subpart must be periodically monitored to give early recognition of ineffective corrosion protection, including the following, as applicable:

(a) Each buried or submerged component under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of § 192.463 of this chapter.

(b) Each cathodic protection rectifier or other impressed current power source must be inspected at least 6 times each calendar year, but with intervals not exceeding 2 1/2 months, to ensure that it is operating properly.

(c) Each reverse current switch, each diode, and each interference bond whose failure would jeopardize component protection must be electrically checked for proper performance at least 6 times each calendar year, but with intervals not exceeding 2 1/2 months. Each other interference bond must be checked at least once each calendar year, but with intervals not exceeding 15 months.

(d) Each component that is protected from atmospheric corrosion must be inspected at intervals not exceeding 3 years.

49 CFR 193.2635 (a) – (c); 193.2635(d) will also be completed during the special permit period for those components which are available during the annual atmospheric corrosion monitoring period (some components may be removed or temporarily unavailable during construction work in the GPLNG Terminal). Equipment and components unavailable during the atmospheric corrosion monitoring period will be documented and kept on-file. The removed components will be evaluated and inspected prior to being re-installed in the GPLNG Terminal. If remedial measures are required, all remediation will occur prior to introduction of hazardous fluids.

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart G – Maintenance

REGULATION: 49 CFR PART 193	APPLICABLE REGULATION TEXT	SPECIFIC PORTION OF REGULATION TO BE FOLLOWED
§ 193.2637 Remedial measures	Prompt corrective or remedial action must be taken whenever an operator learns by inspection or otherwise that atmospheric, external, or internal corrosion is not controlled as required by this subpart.	49 CFR 193.2637 as the standard applies to the remedial measures associated with 49 CFR 193.2629, 193.2633 and 193.2635.
§ 193.2639 Maintenance records	<p>(a) Each operator shall keep a record at each LNG plant of the date and type of each maintenance activity performed on each component to meet the requirements of this part. For each LNG facility that is designed and constructed after March 31, 2000 the operator shall also maintain related periodic inspection and testing records that NFPA-59A-2001 (incorporated by reference, see § 193.2013) requires. Maintenance records, whether required by this part or NFPA-59A-2001, must be kept for a period of not less than five years</p> <p>(b) Each operator shall maintain records or maps to show the location of cathodically protected components, neighboring structures bonded to the cathodic protection system, and corrosion protection equipment.</p> <p>(c) Each of the following records must be retained for as long as the LNG facility remains in service: (1) Each record or map required by paragraph (b) of this section. (2) Records of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures.</p>	<p>49 CFR 193.2639 as it applies to 49 CFR 193.2613, 193.2619(b), 193.2623(a) (post major meteorological or geophysical disturbance only) and 193.2627, 193.2629, 193.2633, 193.2635 and 193.2637 during the special permit period and while the GPLNG Terminal is purged free of all hydrocarbons.</p> <p>49 CFR Part 193.2639, in its entirety will be reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart H - Training

	APPLICABLE REGULATION TEXT	SPECIFIC PORTION OF REGULATION TO BE FOLLOWED
<p>REGULATION: 49 CFR Part 193 § 193.2703 Design and fabrication.</p>	<p>For the design and fabrication of components, each operator shall use—</p> <p>(a) With respect to design, persons who have demonstrated competence by training or experience in the design of comparable components.</p> <p>(b) With respect to fabrication, persons who have demonstrated competence by training or experience in the fabrication of comparable components.</p>	<p>49 CFR 193.2703 for personnel performing mitigation under 49 CFR 193.2637. Mitigation work under 49 CFR 193.2637 will occur as necessary upon execution of 49 CFR 193.2627, 193.2629, 193.2633 and/ or 193.2635.</p> <p>49 CFR Part 193.2703, in its entirety will be reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>
<p>§ 193.2705 Construction, installation, inspection, and testing.</p>	<p>(a) Supervisors and other personnel utilized for construction, installation, inspection, or testing must have demonstrated their capability to perform satisfactorily the assigned function by appropriate training in the methods and equipment to be used or related experience and accomplishments.</p> <p>(b) Each operator must periodically determine whether inspectors performing construction, installation, and testing duties required by this part are satisfactorily performing their assigned functions.</p>	<p>49 CFR 193.2705 for personnel performing mitigation under 49 CFR 193.2637. Mitigation work under 193.2637 will occur as necessary upon execution of 49 CFR 193.2627, 193.2629, 193.2633 and/ or 193.2635.</p> <p>49 CFR 193.2705, in its entirety will be reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>
<p>§ 193.2707 Operations and maintenance.</p>	<p>(a) Each operator shall utilize for operation or maintenance of components only those personnel who have demonstrated their capability to perform their assigned functions by</p> <p>(1) Successful completion of the training required by 49 CFR 193.2713 and 193.2717; and</p> <p>(2) Experience related to the assigned operation or maintenance function; and</p>	<p>49 CFR 193.2707 for the performance of maintenance procedures specified under 49 CFR 193.2605.</p> <p>49 CFR 193.2707, in its entirety will be reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart H - Training

REGULATION: 49 CFR Part 193	APPLICABLE REGULATION TEXT	SPECIFIC PORTION OF REGULATION TO BE FOLLOWED
§ 193.2711 Personnel health.	<p>(3) Acceptable performance on a proficiency test relevant to the assigned function.</p> <p>(b) A person who does not meet the requirements of paragraph (a) of this section may operate or maintain a component when accompanied and directed by an individual who meets the requirements.</p> <p>(c) Corrosion control procedures under 49 CFR 193.2605(b), including those for the design, installation, operation, and maintenance of cathodic protection systems, must be carried out by, or under the direction of, a person qualified by experience and training in corrosion control technology.</p>	<p>49 CFR 193.2711 as this relates to the performance of maintenance procedures specified under 49 CFR 193.2605.</p> <p>49 CFR 193.2711, in its entirety will be reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart H - Training

REGULATION: 49 CFR Part 193	APPLICABLE REGULATION TEXT	SPECIFIC PORTION OF REGULATION TO BE FOLLOWED
<p>§ 193.2713 Training: operations and maintenance.</p>	<p>(a) Each operator shall provide and implement a written plan of initial training to instruct</p> <p>(1) All permanent maintenance, operating, and supervisory personnel</p> <p>(ii) About the potential hazards involved in operating and maintenance activities; and</p> <p>(iii) To carry out aspects of the operating and maintenance procedures under 49 CFR 193.2503 and 193.2605 that relate to their assigned functions; and</p> <p>(b) A written plan of continuing instruction must be conducted at intervals of not more than two years to keep all personnel current on the knowledge and skills they gained in the program of initial instruction.</p>	<p>49 CFR 193.2713(a)(1) (ii) and (iii), and 193.2713(b) for the performance of maintenance procedures specified under 49 CFR 193.2605.</p> <p>49 CFR 193.2713, in its entirety will be reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>

Appendix C – 49 CFR Part 193 Regulations Which GPLNG Continues to Perform

Subpart H - Training

	APPLICABLE REGULATION TEXT	SPECIFIC PORTION OF REGULATION TO BE FOLLOWED
<p>REGULATION: 49 CFR Part 193 § 193.2719 Training: records</p>	<p>(a) Each operator shall maintain a system of records which</p> <p>(1) Provide evidence that the training programs required by this subpart have been implemented; and</p> <p>(2) Provide evidence that personnel have undergone and satisfactorily completed the required training programs.</p> <p>(b) Records must be maintained for one year after personnel are no longer assigned duties at the LNG plant.</p>	<p>49 CFR 193.2719 for the training related to the performance of maintenance procedures specified under 49 CFR 193.2605. Records will also be maintained for the following training: 49 CFR 193.2703 and 193.2705 pertaining only to remedial work under 49 CFR 193.2637; 193.2707, 193.2711, 193.2713(a)(1)(ii) and (iii), and 193.2713(b) pertaining only to the performance of maintenance procedures specified under 49 CFR 193.2605.</p> <p>49 CFR 193.2719, in its entirety will be reinstated upon the reintroduction of hazardous fluids in the GPLNG Terminal. Prior to the reintroduction of Hydrocarbons into the equipment and components in the GPLNG Terminal and as part of the Pre-Commissioning process, GPLNG will ensure all applicable regulations in 49 CFR Part 193 are met. All equipment and components in the GPLNG Terminal will be compatible with its operational or safety purposes by repair or replacement.</p>