

STANDARD INSPECTION REPORT OF AN LNG FACILITY

A completed **Standard Inspection Checklist, OQ Field Validation Protocol form and Cover Letter/Field Report** are to be submitted to the Senior Engineer within **30 days** from completion of the inspection.

Inspection Report	
Inspector/Submit Date: <u>K. Chu 12/13/2007</u>	Sr. Engineer Review/Date: <u>D. Lykken 12/13/2007</u>

POST INSPECTION MEMORANDUM (PIM)			
Name of Operator:	Puget Sound Energy		
Name of Unit(s):	Gig Harbor Satellite LNG Plant	Docket:	PG-070050
Records Location:	Gig Harbor		
Unit Type & Commodity:	Liquefied Natural Gas		
Inspection Type:	Standard	Inspection Date(s):	11/27- 29 /2007
UTC inspector(s):	Kuang Chu & Stephanie Zuehlke/WUTC		

Summary:
 The Gig Harbor Liquefied Natural Gas (LNG) peak shaving facility consists of a truck transfer, storage, vaporizer, auxiliary power, control center, two 64,000 gallon storage tanks and two transport mobile tankers. During the winter months, the plant provides peak shaving for the Gig Harbor peninsula distribution area. Currently, the Peninsula is served by two 8-inch diameter high pressure gas mains from Des Moines via underwater crossing to Maury and Vashon Islands. A second storage tank was acquired and installed during the summer of 2006. LNG is transported to the facility using PSE tankers by a third party transporter. ~~PSE currently has two tankers.~~

Findings:

After reviewing the Operating and Maintenance (O&M) manual, the Emergency Operating Plan (EOP), records, and field inspection, no items of concern or probable violations were found at the Gig Harbor LNG facility. There were two recommendations for the O&M manual for clarification. The recommendations are as follows (with proposed revisions in bold):

Recommendations

1. In Section 17.1.2, the first sentence should be revised to read: The material contained in this plan shall be reviewed **once** every two **calendar** years, not to exceed 27 months.
2. In Section 13.10.5, the second sentence should be revised to read: In order to avoid overfilling or overpressure, manually terminate the flow of LNG by **closing block valve V-422** before the liquid level reaches 40.8 in. w.c.

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Name of Operator: Puget Sound Energy		
H.Q. Address: 355 110 Avenue NE/EST-07W P.O. Box 90868 EST-07W Bellevue, WA 98009-0868	System/Unit Name and Address ⁽¹⁾ Gig Harbor LNG Satellite Plant 9410 54 th Ave. NW Gig Harbor, WA 98335	
Co. Official: Stephanie Kreshel Phone No.: (425) 462-3734 Fax No.: (425) 462-3770 Emergency Phone No.: 1-888-225-5773	Activity Record ID#: UTC Docket No. PG-070050 Phone No.: (253) 261-0044 Fax No.: (425) 462-3770 Emergency Phone No.: 1-888-225-5773	
Persons Interviewed	Titles	Phone No.
Chuck Dougherty	LNG Plant Supervisor	(253) 261-0044
Sharon Morgan	Maintenance & Compliance Coordinator	(253) 405-2289
Stephanie Kreshel	Compliance Coordinator	(425) 462-3734
Rhonda Landress	Compliance Coordinator	(425) 457-5816
PHMSA Representative(s): ⁽¹⁾ Kuang Chu & Stephanie Zuehlke/WUTC	Date(s): ⁽¹⁾ 11/27-29/2007	
Company System Maps (copies for Region Files): Gig Harbor, WA		
Type of facility: Base Load <input type="checkbox"/> Satellite <input type="checkbox"/> Peak Shaving <input checked="" type="checkbox"/> Mobile/Temporary <input type="checkbox"/>		
<small>Note: Some mobile and temporary LNG facilities must meet the requirements of Section 2.3.4 of NFPA 59A (2001 edition) in lieu of the requirements of Part 193 per 193.2019.</small>		
Year Facility Was Placed In Operation:	November 19, 2004	
Liquefaction Rate, MMCFD:	N/A	
Type Of Liquefaction Cycle:	N/A	
Number of Vaporizers & Capacities:	One at 650 MSCFH	
Storage Tank Statistics - Fabricator, Volumes, Materials, etc:		
The fabricator of the two 70,000-gallon water capacity storage tanks was Chart Industries Inc (CHI). The inner tanks are made of 9% nickel alloy and the outer tanks are made of carbon steel. Each tank has a 64,000 gallons LNG capacity.		

Comments:
The Gig Harbor facility maintains some LNG throughout the year and is operated during Fall and Winter months to meet peak load demands. The primary gas supply to the Gig Harbor Peninsula is from two high pressure 8-inch diameter mains that cross the Puget Sound waters from Des Moines via Maury and Vashon Islands.

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For information relating to cooperation and coordination between PHMSA, FERC, and Coast Guard, reference the 1985 Memorandum of Understanding Between the Department of Transportation and the Federal Energy Regulatory Commission Regarding LNG Transportation Facilities, and the February 10, 2004 Interagency Agreement Among the Federal Energy Regulatory Commission United States Coast Guard and Research and Special Programs Administration for the Safety and Security Review of Waterfront Import/Export Liquefied Natural Gas Facilities.

PROCEDURES

		§193.2011 REPORTING PROCEDURES	S	U	N/A	N/C
.2017	191.5 / 191.3	Incident reporting.				
		▪ Telephonically reporting incidents to NRC (800) 424-8802.	x			
		▪ Event that involves a release of gas or liquefied gas from an LNG facility and a death or personal injury requiring hospitalization or property damage (includes cost of lost gas) of \$50,000 or more.	x			
		▪ Event that involves an emergency shutdown.	x			
		▪ Significant event (operator's judgment).	x			
	191.25(a)	Filing safety-related condition reports.				
		▪ Within five (5) working days of determination.	x			
▪ Within ten (10) working days of discovery.		x				

Comments:

		§193.2017	S	U	N/A	N/C
.2017	.2017(c)	Operator must have plans and procedures required for the plant. These plans and procedures must be reviewed and updated: (1) when a component is changed significantly or a new component is installed; and	x			
		(2) at intervals not exceeding 27 months, but at least once every 2 calendar years. <i>Notes: PSE's O & M manual section 17.1.2 does not meet the intent of 193.2017(c) (2). It should specifically address "once every 2 calendar years." PSE indicated that they would correct the language to reflect the code requirement.</i>		x		

Comments:

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		§193.2503 NORMAL OPERATING PROCEDURES	S	U	N/A	N/C
.2017	.2503	Written operating procedures that cover the topics in (a) through (g) must be provided.				
	.2503(a)	Monitoring operating components and buildings for leaks, fires, and malfunctions that could cause a hazardous condition (see §193.2507).	x			
	.2503(b)	Startup and shutdown, including initial startup and performance testing to demonstrate that components will operate satisfactorily in service.	x			
	.2503(c)	Recognizing abnormal operating conditions.	x			
	.2503(d)	Purging and inerting - procedure must meet the provisions of AGA <i>Purging Principles and Practices</i> after being taken out of service and before being returned to service (see §193.2517).	x			
	.2503(e)	Maintaining the operation of vaporizers within design limits. (with regard to vaporization rate, temperatures, and pressures).	x			
	.2503(f)	Maintaining the operation of liquefaction units within design limits. (with regard to temperatures, pressures, diff. pressures, and flow rates). <i>Notes: There is no liquefaction facility in this plant.</i>			x	
	.2503(g)	<p>Cool down of components so thermal stresses are kept within design limits. After stabilization, cryo. piping systems must be checked for leaks. (see §193.2505). <i>Notes: O & M manual page 28 – etc.</i> <i>There are 3 parts to this section: Vaporization Unit, Truck Unloading and Truck Loading:</i> <i>What was the purpose for rearranging the Section 12 Vaporization Procedures?</i> <i>Please identify in the newly formatted section for the Vaporization Unit.</i> <i>Where do you address the process/procedure for monitoring the piping from the storage tanks to the vaporization unit for leaks? (truck loading and unloading are already complete)</i> <i>The order and the procedure section titles are confusing – identify purpose of renaming.</i> <i>Please show start-up/send out/standby/cool down/shutdown log records for pressure monitoring, producing and cooldown.</i> <i>Check on the type of valves used to throttle pressure in 12.3.3.</i> <i>What is the procedure if FCV-201 fails to open in 12.3.3?</i> <i>Procedures appear to be derived from a computer program/operating system and relies heavily upon computer for emergency functions . . .</i></p> <p><i>Upon checking the Emergency Operating Plan (EOP) under Maintenance Program page 30 of 71; the user is referred to the O & M manual and other sources for specific operating processes – What is the purpose of the EOP? - it is not a stand alone manual. If for UTC edification purposes, it should be a self contained document.</i> <i>Ask the operator to provide information on their maintenance program from EOP 4.2 Maintenance Program.</i></p> <p><i>All above questions have been answered – constantly monitoring via Combustible Vapor Detectors (CVD's) and Ultraviolet Infrared Fire Detectors (UVIR's). Reviewed testing of systems and O & M manual – all above appear to be okay.</i></p>	x			

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Comments:

		§193.2509 EMERGENCY PROCEDURES	S	U	N/A	N/C
.2017	.2509(a)	The operator must determine the types and locations of non-fire emergencies that may reasonably be expected to occur due to operating malfunctions, structural collapse, personnel error, forces of nature, and activities adjacent to the plant.	x			
	.2509(b)	Written emergency procedures that cover topics (b)(1) through (b)(4) must be provided.				
	.2509(b)(1)	Responding to controllable emergencies including personnel notification and use of appropriate equipment.	x			
	.2509(b)(2)	Recognizing and acting on uncontrollable emergencies.	x			
	.2509(b)(3)	Coordinating evacuation plans with local authorities including catastrophic LNG tank failure.	x			
	.2509(b)(4)	Cooperating with local officials when mutual assistance is required, and keeping them informed of (i) - (iv).				
	.2509(b)(4)(i)	Types, quantities, and locations of fire control equipment.	x			
	.2509(b)(4)(ii)	Potential hazards at the plant, including fires.	x			
	.2509(b)(4)(iii)	Communication and emergency control capabilities at the plant.	x			
	.2509(b)(4)(iv)	The status of each emergency.	x			

Comments:

		§193.2511 PERSONNEL SAFETY PROCEDURES	S	U	N/A	N/C
.2017	.2511(a)	Appropriate protective clothing and equipment must be provided for personnel who are performing emergency response duties.	x			
	.2511(b)	Personnel at fixed locations must either be protected from the heat of fires or have a means of escape.	x			
	.2511(c)	First aid materials must be available at a clearly marked location.	x			

Comments:

		§193.2513 TRANSFER PROCEDURES	S	U	N/A	N/C
.2017	.2513(a)	Written procedures for transferring LNG and other hazardous fluids must be provided.	x			
	.2513(b)	The procedures must include provisions for personnel to perform the tasks in (b)(1) through (b)(7).				

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		§193.2513 TRANSFER PROCEDURES	S	U	N/A	N/C
.2513(b)(1)	Before transfer, verify that the transfer system is ready for use and that the system has been purged (if necessary). <i>Notes: It is documented in 13.9 Process Line Cooldown in Truck unloading procedures under safety precautions 13.6.4 and 13.9.1.2 and also in Truck loading procedures under Safety Precautions in 14.3.4. Purging is not a maintenance activity – purging is separately covered in Section 18 of the O & M manual. This subject is identified in 13.7.1 and 13.6., 13.8, 13.9, and 13.11</i>	x				
.2513(b)(2)	Before transfer, verify that the receiving vessel does not contain an incompatible substance, and that it has enough available capacity to receive the amount of fluid to be transferred.	x				
.2513(b)(3)	Before transfer, verify the maximum filling volume of the receiving vessel to ensure that expansion of the incoming fluid (due to warming) will not result in overfilling or overpressure. <i>Notes: It is in page 35 of 84 of O & M manual. The operator added Table 13-1 Tank Level in Inches vs. Gallons under 13.7.1 after the inspection in 2006.</i>	x				
.2513(b)(4)	When transferring LNG into a partially filled vessel, take whatever steps are necessary to prevent stratification. <i>Notes: PSE provided us with a letter from Peter C. Dirksen of CHI Engineering dated September 5, 2007 – the design firm. It explains that this facility and the configuration of the tank do not present a roll-over issue due to several reasons. Additionally, it discusses the tank loading procedures which include top and bottom filling which further promotes mixing in the LNG tanks.</i>	x				
.2513(b)(5)	During transfer, keep an eye on transfer rates, liquid levels, and vapor returns in order to prevent overfilling or overpressuring.	x				
.2513(b)(6)	Manually terminate flow before overfilling or overpressuring occurs. <i>Notes: Automatic shutdowns defined in 13.12. Both field operator and control room operator will know and they have a manual valve (V-422) to terminate the flow if needed. Sections 13.9.1.5 and 13.10.5 identify this procedure. We suggested that they include the valve number V-422 in 13.10.5. PSE agreed that it would be included.</i>	x				
.2513(b)(7)	After transfer, deactivate the cargo transfer system in a safe manner (depressuring, venting, disconnecting, etc.).	x				
.2513(c)	Written procedures for cargo transfer must be located at the transfer area, and they must include provisions for personnel to perform the tasks in (c)(1) through (c)(7).					
.2513(c)(1)	Be in constant attendance during all cargo transfer operations.	x				
.2513(c)(2)	Whenever a truck is being driven in reverse in the transfer area, ensure that someone is positioned at the back of the truck to aid the driver.	x				
.2513(c)(3)	Before transfer, verify (c)(3)(i) through (c)(3)(iv).					
.2513(c)(3)(ii)	All transfer hoses have been visually inspected for damage and defects.	x				
.2513(c)(3)(iii)	Tank truck is electrically grounded and the wheels are chocked.	x				
.2513(c)(3)(iv)	Tank truck engine is off, unless it is needed for the transfer.	x				
.2513(c)(4)	If the truck engine is off during transfer, it is not to be restarted until the transfer lines are disconnected and any released vapors have dissipated.	x				
.2513(c)(5)	Prevent loading of LNG into a tank car or tank truck that is not in exclusive LNG service, unless specific tests have been performed.	x				
.2513(c)(6)	Verify that all transfer lines have been disconnected and equipment cleared before allowing the tank car or tank truck to move from the transfer position.	x				
.2513(c)(7)	Verify that transfers into a pipeline system will not exceed the pressure or temperature limits of the pipeline.	x				

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Comments:

		§193.2515 INVESTIGATION OF FAILURE PROCEDURES	S	U	N/A	N/C
.2017	.2515	Each operator shall investigate the cause of each explosion, fire, or LNG spill or leak which results in:				
	.2515(a)	(1) death or an injury that requires hospitalization, or (2) property damage in excess of \$10,000.	x			
	.2515(b)	After an investigation, appropriate action must be taken to minimize a recurrence.	x			
	.2515(c)	Operator must cooperate during post-accident investigations and should maintain the scene in its post-accident state (to the extent practical).	x			

Comments:

		§193.2519 COMMUNICATION SYSTEM PROCEDURES	S	U	N/A	N/C
.2017	.2519(a)	Primary communications system provides verbal communications for all employees and their assigned work stations.	x			
	.2519(b)	Plants over 70,000 gallons storage capacity must provide an emergency communication system separate from the primary and security communication systems in 193.2909.	x			
	.2519(c)	Each communication system must have a backup power supply.	x			

Comments:

		§193.2521 OPERATING RECORD PROCEDURES	S	U	N/A	N/C
.2017	.2521	Each operator shall maintain a record of results of each inspection, test and investigation required by this subpart. For each LNG facility that is designed and constructed after March 31, 2000 the operator shall also maintain related inspection, testing, and investigation records that NFPA 59A requires. Such records, whether required by this part or NFPA 59A, must be kept for a period of not less than five years.	x			

Comments:

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		§193.2605 MAINTENANCE PROCEDURES	S	U	N/A	N/C
.2017	.2605(a)	The operator must establish a schedule for conducting, consistent with generally accepted engineering practices, the periodic inspections or tests required by Subpart G, and must perform those inspections or tests.				
	.2605(c)	The maintenance manual(s) must include instructions on how to recognize safety-related conditions that would need to be reported (191.23).	x			

Comments:

		§193.2609 SUPPORT SYSTEM PROCEDURES	S	U	N/A	N/C
.2017	.2609	Foundations and support systems (e.g., pipe rack supports) must be inspected for changes that could impair their support.	x			

Comments:

		§193.2611 FIRE PROTECTION PROCEDURES	S	U	N/A	N/C
.2017	.2611(a)	The maintenance schedule for fire control equipment must minimize the amount of equipment that is out of service at any one time.	x			
	.2611(b)	Maintain access routes for movement of fire control equipment within the plant to reasonably provide for use in all weather conditions.	x			

Comments:

		§193.2613 AUXILIARY POWER SOURCE PROCEDURES	S	U	N/A	N/C
.2017	.2613	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 operate equipment that would have to be served by that power source in an emergency. <i>Notes: This is included in 24.10.2.2 Auxiliary Power Source of the new manual. Annual load test via annual service and inspection conducted by Cummins NW (part of the Cummins engine company) and in addition, PSE schedules a technician to come in and do a load test/bank.</i>	x			

Comments:

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		§193.2615 ISOLATING AND PURGING PROCEDURES	S	U	N/A	N/C
.2017	.2615(a)	Before personnel begin maintenance activities on components handling flammable fluids which are isolated for maintenance, the component must be purged in accordance with a procedure which meets the requirements of AGA "Purging Principles and Practice," unless the maintenance procedures under §193.2605 provide that the activity can be safely performed without purging.	x			
	.2615(b)	If the component or maintenance activity provides an ignition source, a technique in addition to isolation valves (such as removing spool pieces or valves and blank flanging the piping, or double block and bleed valving) must be used to ensure that the work area is free of flammable fluids.	x			

Comments:

		§193.2617 REPAIR PROCEDURES	S	U	N/A	N/C
.2017	.2617(b)	The maintenance procedures must include precautions to be taken when repairing a component while it is operating.	x			

Comments:

		§193.2619 CONTROL SYSTEM PROCEDURES	S	U	N/A	N/C
.2017	.2619(a)	Each control system must be properly adjusted to operate within design limits.	x			
	.2619(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.	x			
	.2619(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: (1) Control systems used seasonally, such as for liquefaction or vaporization, must be inspected and tested before use each season. (2) Control systems that are intended for fire protection must be inspected and tested at regular intervals not to exceed 6 months.	x			
	.2619(d)	Control systems that are normally in operation, such as required by a base load system, must be inspected and tested once each calendar year but with intervals not exceeding 15 months.	x			
	.2619(e)	Relief valves must be inspected and tested for verification of the valve seat lifting pressure and reseating.	x			

Comments:

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		§193.2621 TESTING TRANSFER HOSE PROCEDURES	S	U	N/A	N/C
.2017	.2621(a)	Hoses used for transferring LNG or flammable refrigerant must be tested to the maximum pump pressure or the relief valve setting (whichever is less) once each calendar year, with intervals not to exceed 15 months.	x			
	.2621(b)	Hoses used for transferring LNG or flammable refrigerant must be inspected for damage or defect before each use.	x			

Comments:

		§193.2623 INSPECTING LNG STORAGE TANKS	S	U	N/A	N/C
.2017	.2623	Storage tanks and their foundations must be inspected or tested to verify that the structural integrity or safety has not been impaired by conditions (a) through (d).				
	.2623(a)	Foundation and tank movement during normal operation and after each major meteorological or geophysical disturbance.	x			
	.2623(b)	Inner tank leakage.	x			
	.2623(c)	Effectiveness of insulation.	x			
	.2623(d)	Frost heave	x			

Comments:

		§193.2625 CORROSION PROTECTION PROCEDURES	S	U	N/A	N/C
.2017	.2625(a)	Components that might have their integrity or reliability adversely affected by corrosion (internal, external, or atmospheric) must be identified.	x			
	.2625(b)	Components identified in §193.2625(a) must either be (1) protected from corrosion, or (2) inspected and replaced on a regular basis.	x			

Comments:

		§193.2627 ATMOSPHERIC CORROSION PROCEDURES	S	U	N/A	N/C
.2017	.2627	Components subject to atmospheric corrosion must either be;				
	.2627(a)	▪ made of a material that resists such corrosion, or	x			
	.2627(b)	▪ be protected by a suitable coating or jacketing.	x			

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Comments:

		§193.2629 EXTERNAL CORROSION CONTROL PROCEDURES: BURIED OR SUBMERGED COMPONENTS	S	U	N/A	N/C
.2017	.2629(a)	Buried or submerged components that are subject to external corrosion must be:				
	.2629(a)(1)	▪ made of a material that resists such corrosion, or	x			
	.2629(a)(2)(i)	▪ protected by an external protective coating that meets 192.461, and	x			
	.2629(a)(2)(ii)	▪ protected by a cathodic protection system that meets 192.463 (within one year of construction or installation).	x			
	.2629(b)	Where cathodic protection is applied, electrically interconnected components must be protected as a unit.	x			

Comments:

		§193.2631 INTERNAL CORROSION CONTROL PROCEDURES	S	U	N/A	N/C
.2017	.2631	Components subject to internal corrosion must either be:				
	.2631(a)	▪ made of a material that resists such corrosion, or	x			
	.2631(b)	▪ protected by a suitable coating, inhibitor, or other means	x			

Comments:

		§193.2633 INTERFERENCE CURRENT PROCEDURES	S	U	N/A	N/C
.2017	.2633(a)	Components subject to electrical current interference must be protected by a continuing program to minimize the detrimental effects of such currents.	x			
	.2633(b)	Each cathodic protection system must be designed and installed such that the detrimental effects it might have on adjacent metal components are minimized.	x			
	.2633(c)	Each impressed current power source must be installed and maintained in a manner that prevents adverse interference with communication and control systems.	x			

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		§193.2635 MONITORING CORROSION CONTROL PROCEDURES	S	U	N/A	N/C
.2017	.2635(a)	Each buried or submerged component must be tested at least once each calendar year, with intervals not to exceed 15 months.	x			
	.2635(b)	Each cathodic protection rectifier or other impressed current power source must be inspected at least 6 times per year, with intervals not to exceed 2½ months.	x			
	.2635(c)	Each reverse current switch and diode must be checked at least 6 times per year, with intervals not to exceed 2½ months.	x			
		Each interference bond whose failure would jeopardize component protection must be checked at least 6 times per yr, with intervals not to exceed 2½ mo.	x			
		All other interference bonds must be checked at least once each calendar year, with intervals not to exceed 15 months.	x			
	.2635(d)	Each component that is protected from atmospheric corrosion must be inspected at intervals not exceeding 3 years.	x			
.2635(e)	If corrosion coupons or probes are used to monitor internal corrosion, they must be checked at least twice each calendar year, with intervals not to exceed 7½ months.	x				

Comments:

		§193.2637 REMEDIAL MEASURE PROCEDURES	S	U	N/A	N/C
.2017	.2637	Prompt remedial action must be taken whenever corrosion control deficiencies are found.	x			

Comments:

		§193.2707 OPERATIONS AND MAINTENANCE	S	U	N/A	N/C
.2017	.2707(a)	Operation or maintenance of components must be conducted only by personnel who have demonstrated their capability to perform their assigned functions by- (1) Successful completed training required by §§193.2713 and 193.2717; (2) Experience related to the assigned operation or maintenance function; and, (3) Acceptable performance on a proficiency test relevant to the assigned function.	x			
	.2707(b)	Personnel not meeting the requirements of paragraph .2707(a) may operate or maintain a component when accompanied and directed by an individual who meets the requirements.	x			
	.2707(c)	Corrosion control including 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.	x			

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		§193.2711 PERSONNEL HEALTH	S	U	N/A	N/C
.2017	.2711	Must have a written plan for evaluating the health and physical condition of personnel assigned operations, maintenance, security, or fire protection duties.	x			

Comments:

		§193.2713 TRAINING PROCEDURES: OPERATIONS AND MAINTENANCE	S	U	N/A	N/C
.2017	.2713(a)(1)	New permanent maintenance, operating, and supervisory personnel must receive initial training in the following subjects. The training must be based on a written plan.	x			
	.2713(a)(1)(i)	Characteristics and hazards of LNG and other flammable fluids handled at the plant.				
		▪ Low boiling point and storage temperature (-260°F).	x			
		▪ Flammable limits of natural gas (5% to 15% in air).	x			
		▪ LNG and its vapor are odorless.	x			
		▪ LNG boils even more rapidly when spilled onto water or sprayed with water.	x			
	.2713(a)(1)(ii)	Potential hazards involved in operations and maintenance.	x			
	.2713(a)(1)(iii)	How to carry out operations and maintenance procedures that relate to their assigned functions.	x			
	.2713(a)(2)	All new personnel must receive initial training in the following subjects:				
	.2713(a)(2)(i)	How to carry out the emergency procedures that relate to their assigned functions (see §193.2509).	x			
	.2713(a)(2)(ii)	How to administer first aid.	x			
	.2713(a)(3)	All operating personnel and appropriate supervisory personnel must receive initial training in the following subjects. The training must be based on a written plan.	x			
	.2713(a)(3)(i)	Detailed instructions on facility operations, including:				
		▪ Controls	x			
		▪ Functions	x			
	▪ Operating Procedures	x				
.2713(a)(3)(ii)	LNG transfer procedures (see §193.2513). <i>Notes: They are included in Appendix H of the new O & M manual and identified as LNG Transfer Procedures – Truck Loading and Unloading and Vaporization, page 2 of 2.</i>	x				
.2713(b)	At intervals not to exceed two years, all personnel must receive refresher training in the subjects in which they received initial training. Refresher training must be based on a written plan.	x				

Comments:

STANDARD INSPECTION REPORT OF AN LNG FACILITY

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		§193.2715 TRAINING; SECURITY	S	U	N/A	N/C
.2017	.2715(a)	Personnel responsible for security at an LNG plant must receive initial training in the following subjects. The training must be based on a written plan.	x			
	.2715(a)(1)	How to recognize breaches of security.	x			
	.2715(a)(2)	How to carry out security procedures that relate to their assigned duties (see §193.2903).	x			
	.2715(a)(3)	Whatever plant operations and emergency procedures they need to know to effectively perform their assigned duties.	x			
	.2715(a)(4)	How to recognize conditions that call for security assistance.	x			
	.2715(b)	At intervals not to exceed two years, all personnel must receive refresher training in the subjects in which they received initial training. Refresher training must be based on a written plan.	x			

Comments:

		§193.2717 TRAINING; FIRE PROTECTION PROCEDURES	S	U	N/A	N/C
.2017	.2717(a)	All operations and maintenance personnel, and their immediate supervisors, must be trained according to a written plan of initial instruction, including plant fire drills, to:				
	.2717(a)(1)	▪ Know the potential causes and areas of fires;	x			
	.2717(a)(2)	▪ Know the types, sizes, and predictable consequences of fire; and	x			
	.2717(a)(3)	▪ Know and be able to perform their assigned fire control duties according to the procedures established under §193.2509 and by proper use of equipment provided under §193.2801.	x			
	.2717(b)	At intervals not to exceed two years, all operations and maintenance personnel, and their immediate supervisors, must receive refresher fire protection training. This training must include fire drills and must be based on a written plan.	x			
	.2717(c)	Plant fire drills must provide personnel hands-on experience in carrying out their duties under the fire emergency procedures required by §193.2509.	x			

Comments:

		§193.2801 FIRE PROTECTION	S	U	N/A	N/C
		Note: For plants existing on March 31, 2000, operators have until September 12, 2005 to bring the LNG facility's ESD system, water delivery systems, detection systems, and personnel qualification and training into compliance with NFPA-59A.				
.2017	NFPA-59A 9.1.2	The operator must conduct a fire protection evaluation.	x			
		(1) The type, quantity, and location of equipment necessary for the detection and control of fires, leaks, and spills of LNG, flammable refrigerants, or flammable gases.	x			
		(2) The type, quantity, and location of equipment necessary for the detection and control of potential electrical fires and fires not involving LNG processes.	x			

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		§193.2801 FIRE PROTECTION	S	U	N/A	N/C
		Note: For plants existing on March 31, 2000, operators have until September 12, 2005 to bring the LNG facility's ESD system, water delivery systems, detection systems, and personnel qualification and training into compliance with NFPA-59A.				
		(3) The methods necessary for protection of the equipment and structures from the effects of fire exposure.	x			
		(4) Fire protection water systems.	x			
		(5) Fire extinguishing and other fire control equipment.	x			
		(6) The equipment and processes to be incorporated within the ESD system, including analysis of subsystems, if any, and the need for depressurizing specific vessels or equipment.	x			
		(7) The type and location of sensors necessary to initiate automatic operation of the ESD system or its subsystems.	x			
		(8) The availability and duties of individual plant personnel and what response personnel from outside the plant are available during an emergency.	x			
		(9) The protective equipment, special training, and qualification needed by individual plant personnel for his or her respective emergency duties.	x			
NFPA-59A 9.2.1		LNG Facility shall incorporate an ESD system(s) that when operated isolates or shuts off sources of LNG and all other flammable liquids or gases, and shuts down equipment that adds or sustains an emergency if continued to operate.	x			
NFPA-59A 9.2.2		Equipment, that when shutdown, introduces an additional hazard or result in substantial mechanical damage to equipment, may be omitted from the ESD system as long as the effects of the continued release of flammable or combustible fluids are controlled.	x			
NFPA-59A 9.2.3		The ESD system(s) shall be of a failsafe design or shall be installed, located, or protected from becoming inoperative during an emergency or failure at the normal control system. ESD systems that are not of a failsafe design, all components that are located within 50 `ft (15 m) of the equipment it controls shall be: (1) Installed or located where they cannot be exposed to a fire, or (2) Protected against failure due to a fire exposure for at least 10 minutes`.	x			
NFPA-59A 9.2.4		Operating instructions identifying the location and operation of emergency controls must be posted conspicuously in the facility area.	x			
NFPA-59A 9.2.5		Initiation of the ESD system(s) shall be manual, automatic, or both manual and automatic. Manual actuators shall be located in an area accessible in an emergency, and at least 50 ft (15 m) from the equipment they serve, and shall be distinctly marked with their designated function.	x			
NFPA-59A 9.3.1		Areas, including enclosed buildings, that have a potential for flammable gas concentration, LNG, or flammable refrigerant spills and fire must be monitored for the presence of gas or spilled liquid.	x			
NFPA-59A 9.3.2		Flammable gas detectors must activate visual and audible alarms at the plant site and at an attended location if the facility is not constantly attended.	x			
NFPA-59A 9.3.2		The low-temperature sensors or flammable gas detection system shall sound an alarm at a constantly attended location. Flammable gas detection system must be set no higher than 25% of the LFL of the gas being monitored.	x			
NFPA-59A 9.3.3		Fire detectors must sound an alarm at the plant site and at an attended location if the facility is not constantly attended. If so determined IAW 9.1.2 fire detectors shall activate portions of the ESD system.	x			
NFPA-59A 9.3.4		Any changes to the detection systems as the result of the NFPA-59A 9.1.2 survey shall be designed, installed, and maintained IAW NFPA-72 or NFPA-1221. <i>Notes: O & M manual 24.1.3.8 states that NFPA 1221 does not apply, thereby meeting the requirement.</i>	x			
NFPA-59A 9.4.1		A fire water supply and delivery system must be provided, unless the fire protection evaluation (9-1.2) indicates that fire water is unnecessary or impractical.	x			
NFPA-59A 9.4.2		The fire water supply and distribution systems shall provide for the simultaneous supply of fixed fire protection systems, at their design flow and pressure, plus 1000 gpm (63 L/sec) for not less than 2 hours.	x			

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		§193.2801 FIRE PROTECTION	S	U	N/A	N/C
		Note: For plants existing on March 31, 2000, operators have until September 12, 2005 to bring the LNG facility's ESD system, water delivery systems, detection systems, and personnel qualification and training into compliance with NFPA-59A.				
	NFPA-59A 9.5.1	Portable or wheeled fire extinguishers, recommended for gas fires, available at strategic locations.	x			
	NFPA-59A 9.5.2	If automotive and trailer-mounted fire apparatus is provided at the plant it shall not be used for any other purpose.	x			
	NFPA-59A 9.5.3	All automotive vehicles assigned to the plant shall have a minimum of one portable dry chemical extinguisher with a capacity of at least 18 lb (8.2 kg). <i>Notes: Not really applicable due to no assigned plant vehicles although there are 4 part-time employees w/ 20 lb. extinguishers assigned to their vehicles.</i>	x			
	NFPA-59A 9.7.1	Protective clothing shall be available and readily accessible at the facility to provide protection against exposure to LNG (including cryogenic gloves, safety glasses, face shields, and coveralls or long-sleeve shirts).	x			
	NFPA-59A 9.7.2	Each facility worker who might be endangered by exposure to fire or smoke while performing fire control duties must be supplied with appropriate protective clothing and equipment (including SCBA, if necessary). <i>Notes: Duties of employees assigned to this plant do not involve fighting catastrophic fire and therefore, this section does not really apply. Nevertheless, the protective equipment including fire suits are provided for the employees as stated in EOP 4.7.1.</i>	x			
	NFPA-59A 9.7.3	Operator shall have written practices and procedures to protect employees from the hazards if required to enter a confined or hazardous space.	x			
	NFPA-59A 9.7.4	At least three portable flammable gas detectors must be readily available for use. <i>Notes: Have 4 MSA gas scopes/indicators capable of measuring gas levels plus 5 gas tracks.</i>	x			
	NFPA-59A 9.9.1	Procedures to manually depressurize portions of the plant, as necessary for safety. Isolate portions of the plant from storage tanks or other LNG sources by venting LNG to the atmosphere in case of an emergency. (The direction of discharge shall minimize exposure to personnel or equipment.)	x			
	NFPA-59A 9.9.2	Detailed procedures for taking an LNG container out of service. This action shall not be regarded as a normal operation and not attempted on a routine basis.	x			

Comments:

		§193.2903 SECURITY PROCEDURES	S	U	N/A	N/C
.2017	.2903	Written security procedures must be available at the plant. The procedures must discuss topics (a) through (g).	x			
	.2903(a)	Description and schedule of security inspections and patrols.	x			
	.2903(b)	A list of security personnel positions or responsibilities.	x			
	.2903(c)	Brief description of the security duties of security personnel.	x			
	.2903(d)	Description of actions to be taken when there is an indication of an actual or attempted breach of security.	x			
	.2903(e)	Method(s) for determining which persons are allowed access to the LNG plant.	x			
	.2903(f)	Positive identification of all persons who enter the plant or are in the plant area, using a method at least as effective as picture badges.	x			
	.2903(g)	Liaison with local law enforcement officials to keep them informed about current security procedures.	x			

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Comments:

		§193.2907 PROTECTIVE ENCLOSURE CONSTRUCTION PROCEDURES	S	U	N/A	N/C
.2017	.2907(a)	Each protective enclosure must have a combination of strength and configuration that is sufficient to obstruct unauthorized access to the enclosed facilities.	x			
	.2907(b)	Openings in or under the enclosure must be secured by grates, doors, or covers that provide at least the same level of protection as the enclosure.	x			

Comments:

		§193.2909 SECURITY COMMUNICATIONS PROCEDURES	S	U	N/A	N/C
.2017	.2909(a)	There must be a means for prompt communications between personnel with supervisory security duties and law enforcement personnel.	x			
	.2909(b)	There must be a means for communications between all on-duty personnel who have security duties and all control rooms/control stations.	x			

Comments:

		§193.2911 SECURITY LIGHTING PROCEDURES	S	U	N/A	N/C
.2017	.2911	If security warning systems are not provided for security monitoring, security lighting must be provided for protective enclosures and the areas they enclose (minimum of 2.2 lux from sunset to sunrise).	x			

Comments:

		§193.2913 SECURITY MONITORING PROCEDURES	S	U	N/A	N/C

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		§193.2913 SECURITY MONITORING PROCEDURES	S	U	N/A	N/C
.2017	.2913	If 250,000 bbls or more of storage capacity: <ul style="list-style-type: none"> ▪ each protective enclosure and the area around each facility listed in §193.2905(a) must be monitored for the presence of unauthorized persons. ▪ monitoring must be by visual observation in accordance with the schedule in the security procedures under §193.2903(a) or by security warning systems that continuously transmit data to an attended location. If less than 250,000 bbls of storage capacity: <ul style="list-style-type: none"> ▪ only the protective enclosures need to be monitored. 	x			

Comments:

		§193.2915 ALTERNATIVE POWER SOURCE PROCEDURES			
.2017	.2915	An alternative source of power that meets §193.2445 must be provided for security lighting and for security monitoring and warning systems.			
		.2017	.2915	An alternative source of power that meets §193.2445 must be provided for security lighting and for security monitoring and warning systems. <i>Notes: This requirement is included in O & M 24.10.2.2</i>	x

Comments:

		§193.2917 WARNING SIGN PROCEDURES	S	U	N/A	N/C
.2017	.2917(a)	Warning signs, readable at night from a distance of 100 ft, must be placed conspicuously along each protective enclosure.	x			
	.2917(b)	The signs must be marked with the words "NO TRESPASSING," or words of comparable meaning, on a background of sharply contrasting color.	x			

Comments:

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RECORDS

	§191.5 and §191.25 RECORDS (5-year minimum retention)	S	U	N/A	N/C
191.5	Incident reports (telephonic notification). <i>Notes: There were no incidents during this inspection period.</i>			x	
191.25	Safety-related condition reports (corrective action?). <i>Notes: There were no safety-related condition reports during this inspection period.</i>			x	

	§193.2521 OPERATING RECORDS (5-year minimum retention)	S	U	N/A	N/C
.2017(c)(2)	Review and update the plans and procedures at intervals not exceeding 27 months, but at least once every 2 calendar years. <i>Notes: The newly revised O & M and EOP were reviewed during this inspection.</i>	x			
.2503(c)	Investigation of Abnormal Operating Conditions. <i>Notes: Reviewed Work Order U-144 dated 11.29.06 at 17:04 hours, associated with Cold Weather Action Form and remedy. Total of 8 AOC's during this inspection period and were remedied immediately.</i>	x			
.2503(e)	Vaporization Records. <i>Notes: Total of 41 events between Jan 2006 and 11.28.07. Events recorded annually. Reviewed record titled Cold Weather Action Form record dated 11.26.07 04:00 hours and the following attachments: vaporization system operating procedures check list dated 11.26.07, copy of O & M 11.1 & 11.2 Vaporization System Operating Procedures (user checked off as completed) plus 121 Vaporization procedures through 12.5 of O & M. Reviewed LNG Plant Injection Log for 2007.</i>	x			
.2503(f)	Liquefaction Records. <i>Notes: There is no liquefaction facility in this plant.</i>			x	
.2505(b)	Cooldown Records. <i>Notes: Documented on the above vaporization form on the injection event log.</i>	x			
.2507	Records associated with Monitoring Operations. <i>Notes: Reviewed LNG Plant Log Book, Visitor's Sign-In Register, and also a weekly site inspection form of the same title. Reviewed for dated 11.27.07 – includes Section I Multi Purpose Building checklist Section II Plant Grounds/Security Inspection Checklist and Section II Plant Grounds/Safety Inspection.</i>	x			
.2509(b)(3&4)	Public Liaison with Fire, Police, emergency responders, and local officials. <i>Notes: Reviewed Gig Harbor Police and Fire Marshall for September 2007 invitation to Portland Oregon Training. Reviewed Pierce County Fire District #5 liaison info by performing annual confirmation of emergency points of contact on 10.23.07. Pierce County Sheriff was not contacted due to facility located within the city limits.</i>	x			
.2513	Records associated with transferring LNG or other hazardous fluids. <i>Notes: Reviewed LNG Tanker & Shipment Log dated 10.23.07 and Summary Sheet identifying 9 transfers on Jan 07, 2 on Feb 07 and 8 on October 07. Reviewed hazmat manifest, drivers inspection report, bill of lading identifying quantity shipped, trailer inspection report and attached Truck Unloading Procedure Checklist.</i>	x			
.2515	Investigation of Failures. <i>Notes: There were no failures during this inspection period.</i>			x	

	§193.2639(a) MAINTENANCE RECORDS (5-year minimum retention)	S	U	N/A	N/C
.2603(c & d)	Components taken out of service. <i>Notes: Reviewed Work order # S-171-7 – scheduled maintenance form for component UVIR-821 dated 11.20.07.</i>	x			

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§193.2639(a) MAINTENANCE RECORDS (5-year minimum retention)		S	U	N/A	N/C
.2609	Support systems (foundations and pipe rack supports). <i>Notes: Reviewed form for LNG Tank Foundation Support Systems including Inspection report completed on 11.20.07. Reviewed Work Order (WO) S-31-24. The form is titled "Work Order". Work order for tank was reviewed. Tanks are inspected weekly. Reviewed WO U-139 dated 11.20.07.</i>	x			
.2611(a)	Maintenance activities scheduled on fire control equipment so a minimum of equipment is out of service at one time. Equipment is returned to service in a reasonable period of time. <i>Notes: Reviewed UVIR taken out of service and CVD -430 work order # S-528-4 dated July 7, 2007. A listing of component task notes was also reviewed.</i>	x			
.2613	Auxiliary power sources. ▪ Operational tests (starting, fuel supply, etc.)(monthly). <i>Notes: Generator is the only Aux. power source. Reviewed WO# 73-10 Monthly Emergency Gen. maintenance records for 11.22.04 (their first maintenance record – new plant) Also reviewed WO# S 473-20 Monthly Emergency Gen. maintenance record dated 11.21.07.</i>	x			
	▪ Capacity tests (under load) (annually). <i>Notes: PSE hired Cummins to perform their annual operational load test in addition to their site load and annual maintenance tests. PSE found that Cummins was not completing their annual capacity test even though PSE understood that the tests had been performed. Once this issue was identified, PSE had this test completed in March of 2007. Reviewed LNG WO# S-631-1 Titled Annual Maintenance dated 03.05.07 with the attached Generator Load Test Report with entire capacity accounted for (100 KW, 125 KVA). Before the end of 2007 PSE will perform a CAPACITY test and the test will then be performed annually starting in 2008.</i>	x			
.2617	Repairs. <i>Notes: Reviewed repair WO #U-104 an example which identifies repairs made while a component is in operation. Reviewed repair WO # S93-12 an example which identifies that repairs were made and testing was completed.</i>	x			
.2619(b)	Control systems out of service for 30 days or more must be inspected and tested for operational capability before returning to service. <i>Notes: This has not occurred at this plant during this inspection period.</i>			x	
.2619(c)	Automatic shutdown devices (once per year; not to exceed 15 months).). <i>Notes: Reviewed WO# S43-4 Emergency Shutdown Pushbutton at main gate NW completed on August 1, 2007 with prior WO# completed on January 29, 2007. Previous completion dates for ESD's were 07.10.06, 01.09.06, & 06.27.05</i>	x			
.2619(c)(1)	Seasonal control systems (liquefaction/vaporization) (prior to use). <i>Notes: Reviewed WO# S 667-1 Plant Grounds Form dated 10.01.07 w/attached forms O & M procedures 26.1 and 26.2 and 26.3 plus 11.2.3 through table 11-3, 12.1-12.3, and 14.1 through 14.5</i>	x			
.2619(c)(2)	Fire protection control systems (not to exceed 6 months).). <i>Notes: Completed every 3 months. Reviewed Forms UVIR Fire Detector Vaporizer Area North WO# 172-7 dated 11.20.07, WO# 172-6 dated 07.24.07, and WO# S 172-5 dated 03.24.07.</i>	x			
.2619(d)	Control systems normally in use (once per year; not to exceed 15 months). <i>Notes: Reviewed Main Flow Control Valve FCV-210. It was inspected and tested on 03.12.07 WO# S 57-2 and 02.20.06 WO# S 57-1.</i>	x			
.2619(e)	Relief valves (once per year; not to exceed 15 months). <i>Notes: Reviewed Pressure Build Line Relief Valve Forms PRV # 113 dated 06.26.07 and WO# S 131-1 dated 04.24.06.</i>	x			
.2605(b)	Any applicable components not listed in the line items above (such as ESD system, gas and low temperature detectors, fire protection water systems, and fire extinguishers) inspections/tests per operator's maintenance manual. <i>Notes: Reviewed Fire Extinguisher in the control room – last inspected on 11.20.07 and verified safety records titled Monthly Fire Extinguisher Inspections WO# S543-14 dated 11.20.07 for same extinguisher.</i>	x			

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Comments:

	§193.2639(a) MAINTENANCE RECORDS - CONTROL SYSTEMS - (5-year minimum retention)	S	U	N/A	N/C
.2621	Transfer hose inspection records (once per year; not to exceed 15 months). <i>Notes: One tanker was acquired in spring of 2006 and the other one the year before. The hose was tested by nitrogen to 250psi. The maximum tanker pressure is 96psi during unloading which matches relief valve setting. Reviewed Form titled 2-inch Liquid Hose – LNG Mobile, WO# S552-1 dated 12.01.06 liquid hose pressure tested to 250 psig and also the blank form that identified the next test is to be performed on 12.01.07. Reviewed Form titled Vapor Hose WO S548-1 dated 12.01.06 – vapor hose tested to 250 psig.</i>	x			
.2623	LNG storage tank inspection records.				
	▪ Foundation and tank movement. <i>Notes: Reviewed form for LNG Tank Foundation Support Systems. Inspection report completed on 11.20.07 with Work Order #S-31-24. Form is titled Work Order. Tanks are inspected monthly. Inspections are for both tanks T-101 and T-901.</i>	x			
	▪ Inner tank leakage. <i>Notes: Reviewed Form LNG Storage Tank T-901 WO# S554-53 dated 11.22.07 and T-101 WO # S85-93 dated 11.22.07. Both forms indicate they check for frost or indications of cold spots and any significant changes to tank exterior. Completed on a weekly basis.</i>	x			
	▪ Effectiveness of insulation. <i>Notes: Reviewed Form LNG Storage Tank T-901 WO# S554-53 dated 11.22.07 and T-101 WO # S85-93 dated 11.22.07. Both forms indicate they check for frost or indications of cold spots and any significant changes to tank exterior. Completed on a weekly basis. Also reviewed Form Tank Foundation –Support Systems WO# S31-23 dated 10.30.07. This report is completed monthly.</i>	x			
	▪ Frost heave. <i>Notes: Reviewed form for LNG Tank Foundation Support Systems. Inspection report completed 11.20.07 with Work Order #S-31-24. Form is titled Work Order. Work order for tank was reviewed Tanks are inspected weekly. Inspections are for both tanks T-101 and T-901. Also reviewed Form LNG Storage Tank – T-101 WO# S85-92 dated 11.13.07 and T-901 WO554-52 dated 11.13.07. Inspection frequency is weekly.</i>	x			

	§193.2639(b) MAINTENANCE RECORDS - CORROSION CONTROL - (retain for life of facility)	S	U	N/A	N/C
.2635(a)	Cathodic protection records (once per year; not to exceed 15 months). <i>Notes: Almost all the piping in the plant is aboveground. The buried steel piping is protected by sacrificial anodes. Galvanic system reads at test site TS-048951 at test point location (wire box). Reads on 01.14.05 w/psp=1580mv, 03.31.06 psp=1645mv, and 01.02.07 w/psp=1220mv. There are insulating flanges between buried steel piping and above ground steel piping inside the plant. The main gas line leaving the plant is 8" carbon steel. Two separately protected underground steel fuel gas lines. TS-052129 tested on 02.07.06 w/psp=1650mv. TS-049132 tested on 02.23.04 w/psp=1550mv. Both of these lines are 3" and tested every 10 years per code requirement.</i>	x			
.2635(b)	Rectifier inspection records (6 per year; not to exceed 2 ½ months). <i>Notes: The CP is galvanic system. There are no rectifiers in the plant.</i>			x	
.2635(c)	Critical interference bonds (6 per year; not to exceed 2 ½ months); noncritical interference bonds (15 months). <i>Notes: There are no critical interference bonds in the plant.</i>			x	

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	§193.2639(b) MAINTENANCE RECORDS - CORROSION CONTROL - (retain for life of facility)	S	U	N/A	N/C
.2635(d)	Atmospheric corrosion records (once every 3 years).	x			
.2635(e)	Internal corrosion monitoring records (twice per year; not to exceed 7 ½ months).	x			
.2639(c)	Records or maps showing CP components, and structures bonded to the pipeline. (Maintained for the life of the pipeline.) <i>Notes: Main in Bujacich Rd. is 8" PE at plant entrance and transitions to 8" STW to inside of the plant. The two 3" fuel gas risers have their own galvanic protection. Reads are taken once every 10 years. The atmospheric corrosion inspections are completed once per month.</i>	x			

Comments:

	§193.2711 PERSONNEL HEALTH (Retain for duration of employment, or per requirements of operator's health plan.)	S	U	N/A	N/C
.2711	Personnel health records. <i>Notes: Reviewed Fitness for Duty forms titled Performance Test. Form identifies that operator shall be physically able to perform assigned duties in the following areas: operation, maintenance, security and fire protection dated 11.08.07. Also reviewed training agenda of fitness for duty for PSE Gas Operations – OQ Program meeting Personnel Health.</i>	x			

Comments:

	§193.2713 / .2715 / .2717 INITIAL and FOLLOW-UP TRAINING (retain for duration of employment, plus one year)	S	U	N/A	N/C
.2713(a)	Initial training - operations and maintenance. <i>Notes: There were no new employees.</i>				
	▪ Characteristics and hazards of LNG.	x			
	▪ Emergency procedures related to assigned duties.	x			
	▪ First-aid.	x			
	▪ Facility operations, controls, functions.	x			
	▪ LNG transfer operations.	x			
.2713(b)	Follow-up operations and maintenance training (every 2 years).	x			
.2715(a)	Initial training - security.				
	▪ Recognize breaches of security.	x			
	▪ Carry out security procedures related to assigned function.	x			
	▪ Recognize conditions where security assistance is needed.	x			

STANDARD INSPECTION REPORT OF AN LNG FACILITY

Unless otherwise noted, all code references are to 49 CFR Part 193. S – Satisfactory U – Unsatisfactory N/A – Not Applicable N/C – Not Checked
 If an item is marked U, N/A, or N/C, an explanation must be included in this report.

§193.2713 / .2715 / .2717 INITIAL and FOLLOW-UP TRAINING (retain for duration of employment, plus one year)		S	U	N/A	N/C
.2715(b)	Follow-up security training (every 2 years).	x			
.2717(a)	All plant maintenance and operations personnel including immediate supervisors, must be trained according to a written plan of initial instruction, including plant fire drills, to:				
	▪ Know the potential causes and areas of fire;	x			
	▪ Know the types, sizes, and predictable consequences of fire; and	x			
	▪ Know and be able to perform their assigned fire control duties and proper use of equipment.	x			
.2717(b)	Follow-up fire protection training, including plant fire drills, (every 2 years).	x			
.2717(c)	Plant fire drills must provide personnel hands-on experience in carrying out their duties under the fire emergency procedures.	x			

Comments:

FIELD REVIEW		S	U	N/A	N/C
.2441	Control Center	x			
.2511(c)	First aid material. <i>Notes: Located in control room with additional burn blankets in shop.</i>	x			
.2519(a)	Verbal communication system for all operating personnel.	x			
.2519(b)	Verbal emergency communication system (if >70,000 gal).	x			
.2519(c)	Backup power supply for communication systems.	x			
.2607(a)	Excessive external icing.	x			
.2607(b)	LNG plant grounds maintenance and upkeep (grass, trash, ... etc.).	x			
.2609	Support systems (foundations, pipe rack supports, etc.).	x			
.2611(b)	Access routes for fire control equipment kept clear of snow, etc.	x			
.2613	Auxiliary power supply.	x			
.2619(a)	Control systems calibrated to operate within design limits.	x			
.2621(b)	Transfer hose(s).	x			
.2623	Storage tanks.	x			
.2627	Atmospheric corrosion.	x			
.2635	Cathodic protection (CP levels).	x			
NFPA-59A 9.2.3	ESD System initiation devices and ESD Station locations.	x			
NFPA-59A 9.2.4	Operating instructions identifying the location and operation of emergency controls shall be posted conspicuously in the facility area.	x			

STANDARD INSPECTION REPORT OF AN LNG FACILITY

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If an item is marked U, N/A, or N/C, an explanation must be included in this report.

FIELD REVIEW		S	U	N/A	N/C
NFPA-59A 9.3.1	Monitor enclosed buildings that have a potential for flammable refrigerant spills and fire. <i>Notes: There are no enclosed buildings to store flammable refrigerant in this plant.</i>			x	
NFPA-59A 9.3.2	Continuously monitored low-temperature sensors to sound an alarm or flammable gas detection system (to activate at not more than 25% LFL) to activate an audible and visual alarm.	x			
NFPA-59A 9.3.3/4	Fire detection system.	x			
NFPA-59A 9.4	Fire protection water system.	x			
NFPA-59A 9.5.1	Portable fire extinguishers	x			
NFPA-59A 9.5.3	Fire extinguisher (at least 18 lb. (8.2 kg) on each automotive vehicle assigned to the plant).	x			
NFPA-59A 9.7.1	Protective clothing, equipment (including cryogenic gloves, safety glasses, face shields, and coveralls or long-sleeve shirts).	x			
NFPA-59A 9.7.4	Portable gas detectors available (a least 3).	x			
.2905	Protective enclosures.	x			
.2911	Lighting.	x			
.2915	Alternative power sources.	x			
.2917	Warning signs along fence or boundary, visible at 100 ft. at night.	x			

Comments:

The following Ultraviolet Infrared Fire Detectors (UVIR's) were tested during field inspection: (1) Truck unloading area (UVIR-827), (2) LNG tank area (UVIR-816), and (3) Vaporizer South (UVIR-826). All 3 tests were successful.

The following Combustible Vapor Detectors (CVD's) were tested during field inspection: (1) Truck unloading area (CVD-432), (2) East spill pit (CVD-818), (3) Tank 101 (CVD-817), and (4) Vaporizer south end (CVD-825). All 4 tests were successful.

Recent PHMSA Advisory Bulletins (Last 2 years)

Leave this list with the operator.

<u>Number</u>	<u>Date</u>	<u>Subject</u>
ADB-05-02	April 6, 2005	Pipeline Safety: Strapping Table Calibration for Pipeline Breakout Tank Operators
ADB-05-03	May 23, 2005	Pipeline Safety: Planning for Coordination of Emergency Response to Pipeline Emergencies
ADB-05-04	July 29, 2005	Integrity Management Notifications for Gas Transmission Lines
ADB-05-05	August 10, 2005	Pipeline Safety Advisory Bulletin - Inspecting and Testing Pilot-Operated Pressure Relief Valves
ADB-05-06	August 11, 2005	ADB-05-06 - Pipeline Safety - Countermeasures to Prevent Human Fatigue in the Control Room
ADB-05-07	September 7, 2005	Pipeline Safety Advisory - Potential for damage to Natural Gas Distribution Pipeline Facilities Caused by the Passage of Hurricane Katrina
ADB-05-08	September 7, 2005	Pipeline Safety Advisory - Potential for damage to Pipeline Facilities Caused by the Passage of Hurricane Katrina
ADB-06-01	January 17, 2006	Pipeline Safety: Notice to Operators of Natural Gas and Hazardous Liquid Pipelines To Integrate Operator Qualification Regulations into Excavation Activities
ADB-06-02	June 16, 2006	Submission of Public Awareness Programs for Review
ADB-06-03	November 17, 2006	Pipeline Safety-Notice to Operators of Natural Gas and Hazardous Liquid Pipelines to Accurately Locate and Mark Underground Pipelines Before Construction-Related Excavation Activities Commence Near the Pipelines
ADB-06-04	December 28, 2006	Security at LNG facilities

For more PHMSA Advisory Bulletins, go to <http://ops.dot.gov/regs/advise.htm>