

# Inspection Output (IOR)

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## Report Filters

Assets **All**, and including items not linked to any asset.

Results **All**

## Inspection Information

Inspection Name	8454 Tacoma LNG	Operator(s)	PUGET SOUND ENERGY (22189)	Plan Submitted	11/30/2022
Status	STARTED	Lead	Derek Norwood	Plan Approval	--
Start Year	2022	Team Members	David Cullom, Dennis Ritter, Lex Vinsel, Anthony Dorrough, Scott Anderson, Darren Tinnerstet	All Activity Start	10/10/2022
System Type	LNG	Observer(s)	Deborah Becker, Rell Koizumi	All Activity End	11/17/2022
Protocol Set ID	LNG.2022.01	Supervisor	Scott Rukke	Inspection Submitted	--
		Director	Sean Mayo	Inspection Approval	--

## Inspection Summary

### Inspection Scope and Summary

This was the first standard inspection conducted at Tacoma LNG. Operation of LNG equipment began in January 2022. Operations and Maintenance records were reviewed for 2022 and training records were reviewed for 2021 and 2022.

### Facilities visited and Total AFOD

Records were reviewed remotely via Microsoft Teams and the field inspection was conducted at the LNG plant in Tacoma, WA.

### Summary of Significant Findings

There were no findings as a result of these inspections.

### Primary Operator contacts and/or participants

Justin Wahlborg, Compliance Program Manager

Cameron Williams, Sr Regulatory Compliance Analyst

### Operator executive contact and mailing address for any official correspondence

Dan Koch, VP of Operations  
355 110th Ave NE,  
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Bellevue, WA 98004

## Scope (Assets)

#	Short Name	Long Name	Asset Type	Asset IDs	Excluded Topics	Planned	Required	Inspected	Total	Required % Complete
1.	85654 (1941)	Puget Sound Energy-TACOMA LNG	unit	85654	--	96	96	96	96	100.0%

1. Percent completion excludes unanswered questions planned as "always observe".

## Plans

#	Plan Assets	Focus Directives	Involved Groups/Subgroups	Qst Type(s)	Extent	Notes
1.	85654 (1941)	Baseline Records (Form 4), Baseline Pipeline Field Inspection (Form 4)	DC, CR, EP, FS, MO, RPT, TD, TQ, GENERIC	P, R, O, S	Detail	--

## Plan Implementations

Activity #	Name	SMART Act#	Start Date	End Date	Focus Directives	Involved Groups/Subgroups	Assets	Qst Type(s)	Planned	Required	Inspected	Total	Required % Complete
1.	Records	--	10/10/2022	10/13/2022	--	all planned questions	all assets	R	58	58	58	58	100.0%
2.	Field	--	10/10/2022	11/17/2022	--	all planned questions	all assets	O	38	38	38	38	100.0%

1. Since questions may be implemented in multiple activities, but answered only once, questions may be represented more than once in this table.

2. Percent completion excludes unanswered questions planned as "always observe".

## Forms

No.	Entity	Form Name	Status	Date Completed	Activity Name	Asset
1.	Attendance List	Records	COMPLETED	11/30/2022	Records	85654 (1941)

## Results (all values, 96 results)

113 (instead of 96) results are listed due to re-presentation of questions in more than one sub-group.

### DC.TANKS: LNG Storage Tanks

- Question Result, ID, **Sat, MO.LO.COOLDOWN.R, 193.2505(a) (193.2505(b), 193.2503(g), 193.2101, 193.2301)** (also References presented in: MO.LO)  
 Question Text *Do records indicate that cooldown of components was maintained within design limits?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Operator monitor temperature rate of change on liquefaction startup checklist, system is also designed to alarm at -90F/hr, design limit is -120F/hr**
- Question Result, ID, **NA, MO.LO.COOLDOWN.O, 193.2505(b) (193.2301, 193.2303)** (also presented in: MO.LO)  
 Question Text *Do field observations confirm leak checks were performed on components subject to cryogenic temperatures following stabilization?*  
 Assets Covered **85654 (1941)**  
 Result Notes **No such activity/condition was observed during the inspection.**

### DC.FIREPROT: Fire Protection

3. Question Result, ID, [Sat, FS.FG.FIREPROTEVAL.R, 193.2801 \(NFPA 59A, Section 9.1.2, NFPA 600, NFPA 72, NFPA 1221\)](#) (also References presented in: FS.FG)  
 Question Text *Do records indicate that an adequate fire protection evaluation has been conducted as required by NFPA 59A, Section 9.1.2?*  
 Assets Covered [85654 \(1941\)](#)  
 Result Notes [Evaluation completed by Braemar](#)
  
4. Question Result, ID, [Sat, FS.FG.ESDSOURCE.R, 193.2801 \(NFPA 59A, Section 9.2\)](#) (also presented in: FS.FG)  
 Question Text *Do records demonstrate that the emergency shutdown system meets the requirements of NFPA 59A, Section 9.2?*  
 Assets Covered [85654 \(1941\)](#)  
 Result Notes [Braemar Evaluation - Page 55](#)
  
5. Question Result, ID, [NA, FS.FG.ESDSOURCE.O, 193.2801 \(NFPA 59A, Section 9.2, 193.2301, 193.2303\)](#) (also presented in: References FS.FG)  
 Question Text *Do field observations confirm the emergency shutdown system (ESD) has been installed that meets the requirements of NFPA 59A (2001), Section 9.2, for source shutoff and isolation?*  
 Assets Covered [85654 \(1941\)](#)  
 Result Notes [No such activity/condition was observed during the inspection.](#)
  
6. Question Result, ID, [Sat, FS.FG.FIREDETECT.R, 193.2801 \(NFPA 59A, Section 9.3, 193.2101\(a\), 193.2301, 193.2101\(b\)\)](#) (also presented in: FS.FG)  
 Question Text *Do records indicate that flammable gas and fire detection systems meet the requirements of NFPA 59A (2001), Section 9.3?*  
 Assets Covered [85654 \(1941\)](#)  
 Result Notes [Braemar Evaluation](#)
  
7. Question Result, ID, [Sat, FS.FG.FIREDETECT.O, 193.2801 \(NFPA 59A, Section 9.3, 193.2303\)](#) (also presented in: FS.FG)  
 Question Text *Do field observations confirm that the flammable gas and fire detection systems meet the requirements of NFPA 59A (2001), Section 9.3, by location performance and alarm announcement?*  
 Assets Covered [85654 \(1941\)](#)  
 Result Notes [Tested 3 pieces of equipment while on site. All were functional and confirmed via controller](#)  
  
[Gas Detector AT-7220A, Fire Eye XT-7303A and Alarm Switch HS-7329A](#)
  
8. Question Result, ID, [Sat, FS.FG.FIREWATERDIST.R, 193.2801 \(NFPA 59A, Section 9.4\)](#) (also presented in: FS.FG)  
 Question Text *Do records demonstrate that the fire water supply and distribution system meet the requirements of NFPA 59A (2001), Section 9.4?*  
 Assets Covered [85654 \(1941\)](#)  
 Result Notes [Braemar Evaluation - Page 49](#)
  
9. Question Result, ID, [Sat, FS.FG.FIREWATERDIST.O, 193.2801 \(NFPA 59A, Section 9.4, 193.2303\)](#) (also presented in: FS.FG)  
 Question Text *Do field observations confirm the fire water supply and delivery system meet the requirements of NFPA 59A (2001), Section 9.4?*  
 Assets Covered [85654 \(1941\)](#)  
 Result Notes [Water supply system in place, everything looked to be in good condition](#)
  
10. Question Result, ID, [Sat, FS.FG.FIREPROTEQUIP.R, 193.2801 \(NFPA 59A, Section 9.5, 193.2101\(a\), 193.2301, 193.2101\(b\)\)](#) (also presented in: FS.FG)  
 Question Text *Do records demonstrate the staging of fire protection equipment meets the requirements of NFPA 59A (2001), Section 9.5?*  
 Assets Covered [85654 \(1941\)](#)  
 Result Notes [Braemar Evaluation shows location of all fire protection equipment](#)
  
11. Question Result, ID, [Sat, FS.FG.FIREPROTEQUIP.O, 193.2801 \(193.2303, NFPA 59A, Section 9.5\)](#) (also presented in: FS.FG)  
 Question Text *Do field observations confirm the staging of fire protection equipment meets the requirements of NFPA 59A (2001), Section 9.5?*

Assets Covered 85654 (1941)

Result Notes Observed various pieces of firefighting equipment, everything was in the proper location and appeared to be functional

## DC.SECURITY: Security and Protective Enclosures

12. Question Result, ID, Sat, FS.FG.PROTECTENCLOSE.O, 193.2905(a) (193.2905(b), 193.2905(c), 193.2905(d), 193.2905(e),  
References 193.2907(a), 193.2907(b)) (also presented in: FS.FG)

Question Text *Do field observations verify applicable facilities are surrounded by adequate protective enclosures?*

Assets Covered 85654 (1941)

Result Notes Security fence around the perimeter of the facility

13. Question Result, ID, Sat, FS.FG.PROTECTENCLOSURECON.R, 193.2907(a) (193.2905(a), 193.2905(b), 193.2905(c),  
References 193.2905(d), 193.2905(e), 193.2907(b)) (also presented in: FS.FG)

Question Text *Do records indicate protective enclosures are constructed in accordance with 193.2907?*

Assets Covered 85654 (1941)

Result Notes Project Specification for Fences and Gates

Original construction documents reviewed

14. Question Result, ID, Sat, FS.FG.SECURITYLIGHT.O, 193.2911 (193.2303) (also presented in: FS.FG)  
References

Question Text *Do field observations verify adequate security lighting is provided, where applicable?*

Assets Covered 85654 (1941)

15. Question Result, ID, Sat, FS.FG.SECURITYMONITOR.O, 193.2913 (193.2303, 193.2905(a),) (also presented in: FS.FG)  
References

Question Text *Do field observations verify security monitoring meets the requirements applicable to the facility?*

Assets Covered 85654 (1941)

Result Notes Control room is staffed 24 hours and include monitoring security of the facility

16. Question Result, ID, Sat, FS.FG.ALTPOWER.O, 193.2915 (193.2445(a), 193.2445(b)) (also presented in: FS.FG)  
References

Question Text *Do field observations verify there is an alternate (back-up) power source for security lighting and security monitoring and warning systems?*

Assets Covered 85654 (1941)

Result Notes Observed UPS and generator

17. Question Result, ID, Sat, FS.FG.WARNSIGN.O, 193.2917(a) (193.2907(b)) (also presented in: FS.FG)  
References

Question Text *Do field observations verify warning signs are placed about the protective enclosure such that they can be seen from 100 ft at night?*

Assets Covered 85654 (1941)

## CR.CRM: Control Room Management

18. Question Result, ID, Sat, CR.CRM.CONTROLCENTER.O, 193.2441(a) (193.2441(b), 193.2441(c), 193.2441(d), 193.2441(e),  
References 193.2507)

Question Text *Does the control center have the required capabilities and characteristics, and does it monitor components and buildings?*

Assets Covered 85654 (1941)

Result Notes Spoke with controllers and observed their SCADA displays and controls, ran through scenarios to observe how a controller can respond. Controllers have control of various pieces of equipment from the control room

## EP.ERL: Emergency Response Liquids

19. Question Result, ID, NA, EP.ERL.EMERG.R, 193.2509(b)(1) (193.2509(b)(2))  
References

Question Text *Do records convey that operator adequately responded to emergencies and followed its emergency response procedures?*

Assets Covered 85654 (1941)

Result Notes No such event occurred, or condition existed, in the scope of inspection review.

20. Question Result, ID, References Sat, EP.ERL.EVACUATION.R, 193.2509(b)(3)

Question Text *Do records show that evacuation plans were coordinated with local authorities?*

Assets Covered 85654 (1941)

21. Question Result, ID, References Sat, EP.ERL.MUTUALASSIST.R, 193.2509(b)(4)

Question Text *Do records show cooperation with local officials on mutual assistance?*

Assets Covered 85654 (1941)

22. Question Result, ID, References Sat, EP.ERL.EMERPERSONPROT.O, 193.2511(a)

Question Text *Is emergency protective clothing and equipment at the locations and of the type specified?*

Assets Covered 85654 (1941)

Result Notes All staff have FR clothing, cryogenic clothing was observed and is available when needed

23. Question Result, ID, References Sat, EP.ERL.THERMRADPROT.O, 193.2511(b)

Question Text *Is a means of protection from thermal radiation or a means of escape provided at applicable fixed duty locations?*

Assets Covered 85654 (1941)

Result Notes All staff have FR clothing

24. Question Result, ID, References Sat, EP.ERL.FIRSTAID.O, 193.2511(c)

Question Text *Is first aid material readily available and clearly marked?*

Assets Covered 85654 (1941)

Result Notes Observed first aid kits around the facility and first aid room in the main building

## FS.FG: Facilities General

25. Question Result, ID, References Sat, FS.FG.FIREPROTEVAL.R, 193.2801 (NFPA 59A, Section 9.1.2, NFPA 600, NFPA 72, NFPA 1221) (also presented in: DC.FIREPROT)

Question Text *Do records indicate that an adequate fire protection evaluation has been conducted as required by NFPA 59A, Section 9.1.2?*

Assets Covered 85654 (1941)

Result Notes Evaluation completed by Braemar

26. Question Result, ID, References Sat, FS.FG.ESDSOURCE.R, 193.2801 (NFPA 59A, Section 9.2) (also presented in: DC.FIREPROT)

Question Text *Do records demonstrate that the emergency shutdown system meets the requirements of NFPA 59A, Section 9.2?*

Assets Covered 85654 (1941)

Result Notes Braemar Evaluation - Page 55

27. Question Result, ID, References NA, FS.FG.ESDSOURCE.O, 193.2801 (NFPA 59A, Section 9.2, 193.2301, 193.2303) (also presented in: DC.FIREPROT)

Question Text *Do field observations confirm the emergency shutdown system (ESD) has been installed that meets the requirements of NFPA 59A (2001), Section 9.2, for source shutoff and isolation?*

Assets Covered 85654 (1941)

Result Notes No such activity/condition was observed during the inspection.

28. Question Result, ID, References Sat, FS.FG.FIREDETECT.R, 193.2801 (NFPA 59A, Section 9.3, 193.2101(a), 193.2301, 193.2101(b)) (also presented in: DC.FIREPROT)

Question Text *Do records indicate that flammable gas and fire detection systems meet the requirements of NFPA 59A (2001), Section 9.3?*

Assets Covered 85654 (1941)  
Result Notes Braemar Evaluation

29. Question Result, ID, Sat, FS.FG.FIREDETECT.O, 193.2801 (NFPA 59A, Section 9.3, 193.2303) (also presented in: References DC.FIREPROT)  
Question Text *Do field observations confirm that the flammable gas and fire detection systems meet the requirements of NFPA 59A (2001), Section 9.3, by location performance and alarm announcement?*  
Assets Covered 85654 (1941)  
Result Notes Tested 3 pieces of equipment while on site. All were functional and confirmed via controller  
  
Gas Detector AT-7220A, Fire Eye XT-7303A and Alarm Switch HS-7329A
30. Question Result, ID, References Sat, FS.FG.FIREWATERDIST.R, 193.2801 (NFPA 59A, Section 9.4) (also presented in: DC.FIREPROT)  
Question Text *Do records demonstrate that the fire water supply and distribution system meet the requirements of NFPA 59A (2001), Section 9.4?*  
Assets Covered 85654 (1941)  
Result Notes Braemar Evaluation - Page 49
31. Question Result, ID, Sat, FS.FG.FIREWATERDIST.O, 193.2801 (NFPA 59A, Section 9.4, 193.2303) (also presented in: References DC.FIREPROT)  
Question Text *Do field observations confirm the fire water supply and delivery system meet the requirements of NFPA 59A (2001), Section 9.4?*  
Assets Covered 85654 (1941)  
Result Notes Water supply system in place, everything looked to be in good condition
32. Question Result, ID, Sat, FS.FG.FIREPROTEQUIP.R, 193.2801 (NFPA 59A, Section 9.5, 193.2101(a), 193.2301, 193.2101(b)) (also presented in: References DC.FIREPROT)  
Question Text *Do records demonstrate the staging of fire protection equipment meets the requirements of NFPA 59A (2001), Section 9.5?*  
Assets Covered 85654 (1941)  
Result Notes Braemar Evaluation shows location of all fire protection equipment
33. Question Result, ID, Sat, FS.FG.FIREPROTEQUIP.O, 193.2801 (193.2303, NFPA 59A, Section 9.5) (also presented in: References DC.FIREPROT)  
Question Text *Do field observations confirm the staging of fire protection equipment meets the requirements of NFPA 59A (2001), Section 9.5?*  
Assets Covered 85654 (1941)  
Result Notes Observed various pieces of firefighting equipment, everything was in the proper location and appeared to be functional
34. Question Result, ID, Sat, FS.FG.PROTCLOTHING.R, 193.2801 (NFPA 59A, Section 9.7) (also presented in: References DC.FIREPROT)  
Question Text *Do records demonstrate that protective clothing was available in accordance with NFPA 59A, Sections 9.7.1 and 9.7.2?*  
Assets Covered 85654 (1941)  
Result Notes Purchasing records for FR clothing  
  
Procedures list all required PPE
35. Question Result, ID, Sat, FS.FG.PROTCLOTHING.O, 193.2801 (NFPA 59A, Section 9.7) (also presented in: References DC.FIREPROT)  
Question Text *Is protective clothing available as required by NFPA 59A, Section 9.7.1 and 9.7.2?*  
Assets Covered 85654 (1941)  
Result Notes Cryogenic clothing and face shields were available at the facility
36. Question Result, ID, NA, FS.FG.CONFINEDSPACE.O, 193.2801 (NFPA 59A, Section 9.7) (also presented in: References DC.FIREPROT)  
Question Text *Are written practices and procedures adequately implemented for the entry of personnel into confined or hazardous spaces?*  
Assets Covered 85654 (1941)  
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

37. Question Result, ID, References **Sat, FS.FG.GASDETECTORS.O, 193.2801 (NFPA 59A, Sections 9.7)**  
 Question Text *Are at least three portable gas detectors readily available at the plant in accordance with NFPA 59A, Section 9.7.4?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Staff had gas detectors with them and more were available in the main building**
38. Question Result, ID, References **NA, FS.FG.OUTOFSERVICE.R, 193.2801 (NFPA 59A, Section 9.9)**  
 Question Text *Do records demonstrate that an LNG container taken out of service was performed in accordance with NFPA 59A, Section 9.9.2?*  
 Assets Covered **85654 (1941)**  
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**
39. Question Result, ID, References **Sat, FS.FG.PROTECTENCLOSURECON.R, 193.2907(a) (193.2905(a), 193.2905(b), 193.2905(c), 193.2905(d), 193.2905(e), 193.2907(b)) (also presented in: DC.SECURITY)**  
 Question Text *Do records indicate protective enclosures are constructed in accordance with 193.2907?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Project Specification for Fences and Gates**  
  
**Original construction documents reviewed**
40. Question Result, ID, References **Sat, FS.FG.PROTECTENCLOSE.O, 193.2905(a) (193.2905(b), 193.2905(c), 193.2905(d), 193.2905(e), 193.2907(a), 193.2907(b)) (also presented in: DC.SECURITY)**  
 Question Text *Do field observations verify applicable facilities are surrounded by adequate protective enclosures?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Security fence around the perimeter of the facility**
41. Question Result, ID, References **Sat, FS.FG.SECURITYCOMM.O, 193.2909(a) (193.2909(b))**  
 Question Text *Are there adequate security communication capabilities?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Facility is video monitored, phones are placed around the plant and personnel have two-way radios**
42. Question Result, ID, References **Sat, FS.FG.SECURITYLIGHT.O, 193.2911 (193.2303) (also presented in: DC.SECURITY)**  
 Question Text *Do field observations verify adequate security lighting is provided, where applicable?*  
 Assets Covered **85654 (1941)**
43. Question Result, ID, References **Sat, FS.FG.SECURITYMONITOR.O, 193.2913 (193.2303, 193.2905(a),) (also presented in: DC.SECURITY)**  
 Question Text *Do field observations verify security monitoring meets the requirements applicable to the facility?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Control room is staffed 24 hours and include monitoring security of the facility**
44. Question Result, ID, References **Sat, FS.FG.ALTPOWER.O, 193.2915 (193.2445(a), 193.2445(b)) (also presented in: DC.SECURITY)**  
 Question Text *Do field observations verify there is an alternate (back-up) power source for security lighting and security monitoring and warning systems?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Observed UPS and generator**
45. Question Result, ID, References **Sat, FS.FG.POWERSOURCES.O, 193.2445(a) (193.2445(b))**  
 Question Text *Are there at least two sources of power for communication, emergency lighting, and firefighting systems?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Main power, UPS and generator**
46. Question Result, ID, References **Sat, FS.FG.WARNSIGN.O, 193.2917(a) (193.2907(b)) (also presented in: DC.SECURITY)**

Question Text *Do field observations verify warning signs are placed about the protective enclosure such that they can be seen from 100 ft at night?*

Assets Covered 85654 (1941)

## FS.TS: Tanks and Storage

47. Question Result, ID, References Sat, FS.TS.LNGSTRGTANK.R, 193.2639(a) (193.2623(a), 193.2623(b), 193.2623(c), 193.2623(d))

Question Text *Do records show that LNG storage tanks have been adequately inspected?*

Assets Covered 85654 (1941)

Result Notes Tank inspections completed monthly, reviewed records for 2021 and 2022

48. Question Result, ID, References Sat, FS.TS.LNGSTRGTANK.O, 193.2623(a) (193.2623(b), 193.2623(c), 193.2623(d))

Question Text *Do LNG storage tanks appear structurally sound and safe?*

Assets Covered 85654 (1941)

## MO.LM: Liquid Pipeline Maintenance

49. Question Result, ID, References Sat, MO.LM.CMPNTSTATUS.R, 193.2639(a) (193.2603(c), 193.2603(d))

Question Text *Do records show that the status of out of service components was documented as required?*

Assets Covered 85654 (1941)

Result Notes When components are serviced or removed the plant is not operating

50. Question Result, ID, References Sat, MO.LM.FOREIGNMAT.O, 193.2607(a) (193.2607(b))

Question Text *Is the facility free of foreign material or debris that presents a fire hazard?*

Assets Covered 85654 (1941)

Result Notes Grounds were kept very clean

51. Question Result, ID, References Sat, MO.LM.PHYSICALSUPPORT.R, 193.2639(a) (193.2609)

Question Text *Do records show that foundations and support systems have been inspected?*

Assets Covered 85654 (1941)

Result Notes Completed annually, reviewed records for 02/2021, 8/30/2022

52. Question Result, ID, References Sat, MO.LM.PHYSICALSUPPORT.O, 193.2609

Question Text *Are foundations and support systems structurally sound?*

Assets Covered 85654 (1941)

53. Question Result, ID, References Sat, MO.LM.MAINTAINFIREPROTEQ.R, 193.2801 (NFPA 59A Section 9.6)

Question Text *Do records demonstrate an adequate maintenance program for plant fire protection equipment in accordance with NFPA 59A Section 9.6?*

Assets Covered 85654 (1941)

Result Notes Fire Extinguishers inspected annually by outside vendor, completed 12/2021 not yet due for 2022

Monthly checks completed in house, reviewed records for 2021 and 2022

54. Question Result, ID, References NA, MO.LM.FIREPROTOOS.R, 193.2639(a) (193.2611(a))

Question Text *Do records show that maintenance activities on fire protection equipment are scheduled to minimize downtime and ensure a minimum amount of equipment is available?*

Assets Covered 85654 (1941)

Result Notes No such event occurred, or condition existed, in the scope of inspection review.

55. Question Result, ID, References Sat, MO.LM.FIREPROTACCESS.O, 193.2611(b)



Question Text *Are access routes for movement of fire control equipment clear of snow and other obstacles?*

Assets Covered 85654 (1941)

Result Notes Access routes were clear, snow removal is performed by staff in winter

56. Question Result, ID, References Sat, MO.LM.AUXPOWERTEST.R, 193.2639(a) (193.2613)

Question Text *Do records show that auxiliary power systems have been tested monthly for operational capability and annually for capacity?*

Assets Covered 85654 (1941)

Result Notes Reviewed monthly inspection for generator and UPS

Annual load test for generator done November 2021, not yet completed for 2022

Uninterruptable Power Supply inspected monthly and maintained annually, Reviewed records for 2021 and 2022

57. Question Result, ID, References NA, MO.LM.AUXPOWERTEST.O, 193.2613

Question Text *Are monthly or annual tests performed as required by the process?*

Assets Covered 85654 (1941)

Result Notes No such event occurred, or condition existed, in the scope of inspection review.

58. Question Result, ID, References Sat, MO.LM.REPAIRS.R, 193.2639(a) (193.2617(a), 193.2617(b))

Question Text *Do records show that repairs of components were made in accordance with 193 Subpart D (Construction) and assured integrity/operational safety?*

Assets Covered 85654 (1941)

Result Notes Reviewed a sample Work Order where Temperature Indicator was replaced and calibrated

59. Question Result, ID, References Sat, MO.LM.CONTROLSYS.R, 193.2639(a) (193.2619(b), 193.2619(c), 193.2619(d), 193.2619(e))

Question Text *Do records show that control systems, relief valves, and other components were inspected or tested in accordance with 193.2619?*

Assets Covered 85654 (1941)

Result Notes Reviewed records for PSV annual maintenance, completed annually NTE 15 months

Monthly Fire Panel Control inspection

Gas Detectors and Flame Detectors tested every 6 months (11/14/21, 6/30/22, Next due 11/14/22)

60. Question Result, ID, References Sat, MO.LM.CONTROLSYS.O, 193.2619(a)

Question Text *Are control systems operating within design limits?*

Assets Covered 85654 (1941)

Result Notes Observed SCADA displays, all systems were operating within design specs

61. Question Result, ID, References Sat, MO.LM.TXHOSE.R, 193.2639(a) (193.2621(a), 193.2621(b))

Question Text *Do records show that transfer hoses have been tested once each calendar year and inspected before each use?*

Assets Covered 85654 (1941)

Result Notes Hoses tested annually, reviewed 05/2022 and 05/2021

Hoses inspected prior to truck loading, verified on truck loading checklist

62. Question Result, ID, References Sat, MO.LM.TXHOSE.O, 193.2621(b)

Question Text *Are transfer hoses inspected before each use?*

Assets Covered 85654 (1941)

Result Notes Crew inspected hoses prior to truck loading

Hoses appeared to be in good condition

63. Question Result, ID, References Sat, MO.LM.MAINTENANCERECORDS.R, 193.2639(a)

Question Text Are records of each inspection, test and investigation maintained in accordance with 193.2639?

Assets Covered 85654 (1941)

## MO.LO: Liquid Pipeline Operations

64. Question Result, ID, References Sat, MO.LO.PROCESSUPDATE.R, 193.2017(c)(2)

Question Text Do records show that plans and procedures have been reviewed and updated as necessary?

Assets Covered 85654 (1941)

Result Notes Reviewed revisions and redlines of procedures

Procedures are being updated very often at this point and will be reviewed every 2 years going forward

65. Question Result, ID, References Sat, MO.LO.MONITOR.R, 193.2507 (193.2503(a))

Question Text Do records show that the operator monitored operating components and buildings for leaks, fires, and malfunctions that could cause a hazardous condition?

Assets Covered 85654 (1941)

Result Notes Reviewed Board Rounds and Field Rounds records

Verified on site that the operator monitors for leaks and fire

66. Question Result, ID, References Sat, MO.LO.MONITOR.O, 193.2507

Question Text Are operating components and buildings monitored for leaks, fire, and malfunctions that could cause a hazardous condition?

Assets Covered 85654 (1941)

Result Notes Tested 3 pieces of equipment while on site. All were functional and confirmed via controller

Gas Detector AT-7220A, Fire Eye XT-7303A and Alarm Switch HS-7329A

67. Question Result, ID, References Sat, MO.LO.STARTUPSHUTDOWN.R, 193.2521 (193.2503(b))

Question Text Do records show that startup and shutdown procedures, including initial testing, were followed?

Assets Covered 85654 (1941)

Result Notes Reviewed startup procedure and startup checklist records

68. Question Result, ID, References NA, MO.LO.STARTUPSHUTDOWN.O, 193.2503(b)

Question Text Is performance testing being conducted to demonstrate that components will operate satisfactorily in service during startup and shutdown?

Assets Covered 85654 (1941)

Result Notes No such event occurred, or condition existed, in the scope of inspection review.

69. Question Result, ID, References Sat, MO.LO.ABNORMALOPS.R, 193.2521 (193.2503(c))

Question Text Do records show personnel responded to indications of abnormal operations as required by the AOC procedures?

Assets Covered 85654 (1941)

Result Notes Near miss log: Issue with flare detected from HMI, flare (VDU - Vapor Destruction Unit) shutdown and engineering working on fix, detected 3/29/22

Reviewed work orders and follow-ups, V described as difficult to open and close, valve greased, inspected during field visit

70. Question Result, ID, References **Sat, MO.LO.PURGEINERT.R, 193.2517 (193.2503(d))**  
Question Text *Do records show that components that could accumulate significant amounts of combustible mixture were adequately purged?*  
Assets Covered **85654 (1941)**  
Result Notes **Reviewed sample of Purging and Inerting checklist, P2004-MS-011**  
**Completed every time purging and inerting is performed**
71. Question Result, ID, References **NA, MO.LO.PURGEINERT.O, 193.2517**  
Question Text *Is purging of components that can accumulate significant amounts of combustible mixture conducted in accordance with procedures?*  
Assets Covered **85654 (1941)**  
Result Notes **No such activity/condition was observed during the inspection.**
72. Question Result, ID, References **Sat, MO.LO.VAPORIZATION.R, 193.2503(e)**  
Question Text *Do records show that vaporizers operated within their design limits?*  
Assets Covered **85654 (1941)**  
Result Notes **Reviewed operating temperature, pressure and flow rate for vaporizer from Jan 25, 22**
73. Question Result, ID, References **Sat, MO.LO.LIQUEFACTION.R, 193.2503(f)**  
Question Text *Do records show that components operated within their liquefaction design limits?*  
Assets Covered **85654 (1941)**  
Result Notes **Reviewed pressure and temperature data for exchanger, all data within design limits**
74. Question Result, ID, References **Sat, MO.LO.COOLDOWN.R, 193.2505(a) (193.2505(b), 193.2503(g), 193.2101, 193.2301) (also presented in: DC.TANKS)**  
Question Text *Do records indicate that cooldown of components was maintained within design limits?*  
Assets Covered **85654 (1941)**  
Result Notes **Operator monitor temperature rate of change on liquefaction startup checklist, system is also designed to alarm at -90F/hr, design limit is -120F/hr**
75. Question Result, ID, References **NA, MO.LO.COOLDOWN.O, 193.2505(b) (193.2301, 193.2303) (also presented in: DC.TANKS)**  
Question Text *Do field observations confirm leak checks were performed on components subject to cryogenic temperatures following stabilization?*  
Assets Covered **85654 (1941)**  
Result Notes **No such activity/condition was observed during the inspection.**
76. Question Result, ID, References **Sat, MO.LO.LNGTRANS.R, 193.2513(a) (193.2513(b))**  
Question Text *Do records show that LNG transfers were conducted in accordance with requirements?*  
Assets Covered **85654 (1941)**  
Result Notes **Reviewed Truck Loading Checklist**
77. Question Result, ID, References **NA, MO.LO.LNGTRANS.O, 193.2513(b)**  
Question Text *Are LNG transfers conducted in accordance with the process?*  
Assets Covered **85654 (1941)**  
Result Notes **No such activity/condition was observed during the inspection.**
78. Question Result, ID, References **Sat, MO.LO.CARGOTRANS.R, 193.2513(c)**  
Question Text *Do records show that cargo transfers were conducted in accordance with the process?*

Assets Covered 85654 (1941)  
Result Notes First bunker transfer completed 9/15/22, reviewed records and transfer checklist

79. Question Result, ID, References NA, MO.LO.CARGOTRANS.O, 193.2513(c)  
Question Text *Are cargo transfers conducted in accordance with the process?*  
Assets Covered 85654 (1941)  
Result Notes No such activity/condition was observed during the inspection.
80. Question Result, ID, References NA, MO.LO.FAILINVESTIGATE.R, 193.2521 (193.2515(a), 193.2515(b), 193.2515(c))  
Question Text *Do records show that the operator adequately investigated failures?*  
Assets Covered 85654 (1941)  
Result Notes No such event occurred, or condition existed, in the scope of inspection review.
81. Question Result, ID, References Sat, MO.LO.COMMSYS.O, 193.2519(a) (193.2519(b), 193.2519(c), 193.2445(b))  
Question Text *Does the communication system meet all of the requirements of 193.2519?*  
Assets Covered 85654 (1941)
82. Question Result, ID, References Sat, MO.LO.OPERATINGRECORDS.R, 193.2521  
Question Text *Are records of each inspection, test and investigation maintained in accordance with 193.2521?*  
Assets Covered 85654 (1941)

## RPT.RR: Regulatory Reporting (Traditional)

83. Question Result, ID, References NA, RPT.RR.IMMEDREPORT.R, 193.2011 (191.3, 191.5(a), 191.5(b), 191.7(a), 191.7(d))  
Question Text *Do records indicate immediate reports of incidents were made in accordance with 193.2011?*  
Assets Covered 85654 (1941)  
Result Notes No such event occurred, or condition existed, in the scope of inspection review.
84. Question Result, ID, References NA, RPT.RR.INCIDENTREPORT.R, 193.2011 (191.15(b))  
Question Text *Do records indicate reportable incidents were identified and reports were submitted on DOT Form PHMSA 7100.3 within the required timeframe?*  
Assets Covered 85654 (1941)  
Result Notes No such event occurred, or condition existed, in the scope of inspection review.
85. Question Result, ID, References NA, RPT.RR.INCIDENTREPORTSUPP.R, 193.2011 (191.15(d))  
Question Text *Do records indicate accurate supplemental incident reports were filed and within the required timeframe?*  
Assets Covered 85654 (1941)  
Result Notes No such event occurred, or condition existed, in the scope of inspection review.
86. Question Result, ID, References NA, RPT.RR.ANNUALREPORT.R, 193.2011 (191.17(b))  
Question Text *Have complete and accurate Annual Reports been submitted?*  
Assets Covered 85654 (1941)  
Result Notes This is their first year in operation so no annual report has been submitted yet
87. Question Result, ID, References Sat, RPT.RR.NPMSANNUAL.R, 191.29(a) (191.29(b))  
Question Text *Do records indicate: NPMS submissions are completed each year, on or before March 15, representing all plants as of December 31 of the previous year, and if no modifications occurred an email to that effect was submitted?*  
Assets Covered 85654 (1941)
88. Question Result, ID, References Sat, RPT.RR.REGISTRY.R, 193.2011 (191.22(a), 191.22(b), 191.22(c))

Question Text *Do records indicate appropriate control of Operator Identification Numbers (OPIDs) and the National Registry of Pipeline and LNG Operators has been notified of applicable changes, including changes in entity, acquisition/divestiture, and construction in accordance with 191.22?*

Assets Covered 85654 (1941)

Result Notes Notified PHMSA January 24, 2017

89. Question Result, ID, References NA, RPT.RR.SRCR.R, 193.2011 (191.23(a), 191.23(b), 191.25(a), 191.25(c))

Question Text *Do records indicate safety-related condition reports were filed as required?*

Assets Covered 85654 (1941)

Result Notes No such event occurred, or condition existed, in the scope of inspection review.

## TD.ATM: External Corrosion - Atmospheric

90. Question Result, ID, References Sat, TD.ATM.ATMCORRMONITOR.R, 193.2639(b) (193.2635(d), 193.2639(a))

Question Text *Do records show that inspections for atmospheric corrosion were completed at the required intervals?*

Assets Covered 85654 (1941)

Result Notes Completed annually, reviewed records for 02/12/2021, 8/30/2022

91. Question Result, ID, References Sat, TD.ATM.ATMCORRMONITOR.O, 193.2635(d)

Question Text *Are certain components subject to atmospheric corrosive attack coated or jacketed?*

Assets Covered 85654 (1941)

## TD.CP: External Corrosion - Cathodic Protection

92. Question Result, ID, References Sat, TD.CP.BURIEDCOMP.R, 193.2639(b) (193.2629(a))

Question Text *Do records show that applicable buried and submerged components are protected from external corrosion?*

Assets Covered 85654 (1941)

Result Notes CP is provided to underground storage tanks with galvanic anodes, the casing going to the Blair dock is protected with an impressed current rectifier

93. Question Result, ID, References Sat, TD.CP.INTFCURRENT.R, 193.2639(b) (193.2633(a))

Question Text *Do records show that the operator has a continuing program to minimize the detrimental effects of interference currents?*

Assets Covered 85654 (1941)

Result Notes Norton perform annual corrosion testing for Tacoma LNG, they inspect the rectifier and 6 underground storage tanks.

No deficiencies with CP or rectifier

Testing completed 2/5/21 and 4/13/22

No interference currents but Norton checks during annual

94. Question Result, ID, References Sat, TD.CP.EXTCORRMONITOR.R, 193.2639(b) (193.2635(a), 193.2639(a))

Question Text *Do records show that buried or submerged components cathodic protection adequacy was tested once each calendar year not to exceed 15 months?*

Assets Covered 85654 (1941)

Result Notes Norton perform annual corrosion testing for Tacoma LNG, they inspect the rectifier and 6 underground storage tanks.

No deficiencies with CP or rectifier

Testing completed 2/5/21 and 4/13/22

95. Question Result, ID, References **NA, TD.CP.EXTCORRMONITOR.O, 193.2635(a)**  
 Question Text *For certain buried or submerged components, does the cathodic protection meet the requirements of 192.463?*  
 Assets Covered **85654 (1941)**  
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**
96. Question Result, ID, References **Sat, TD.CP.CURRENTTEST.R, 193.2369(b) (193.2635(b), 193.2635(c), 193.2639(a))**  
 Question Text *Do records show adequate electrical checks of rectifiers or other impressed current power source, interference bonds, reverse current switches and diodes and at the required intervals?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Checked monthly by Tacoma LNG personnel**  
  
**Norton perform annual corrosion testing for Tacoma LNG, they inspect the rectifier and 6 underground storage tanks.**  
  
**No deficiencies with CP or rectifier**  
  
**Testing completed 2/5/21 and 4/13/22**
97. Question Result, ID, References **Sat, TD.CP.CURRENTTEST.O, 193.2635(b) (193.2635(c))**  
 Question Text *Are rectifiers, interference bonds, diodes, and reverse current switches properly maintained and are they functioning properly?*  
 Assets Covered **85654 (1941)**  
 Result Notes **Observed rectifier, appeared to be in good condition and working properly**  
  
**Gauges on rectifier read ~4 A and ~4V**
98. Question Result, ID, References **NA, TD.CP.REMEDIATE.R, 193.2639(b) (193.2637, 193.2639(a))**  
 Question Text *Do records show that prompt corrective or remedial action was taken whenever corrosion control deficiencies were found?*  
 Assets Covered **85654 (1941)**  
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**
99. Question Result, ID, References **Sat, TD.CP.RECORDS.R, 193.2639(b) (193.2639(c))**  
 Question Text *Does the operator have records showing cathodically protected components, structures bonded to the CP system, and corrosion protection equipment?*  
 Assets Covered **85654 (1941)**  
 Result Notes **System description showed where CP systems are located**

## **TD.ICP: Internal Corrosion - Preventive Measures**

100. Question Result, ID, References **NA, TD.ICP.INTCORRMONITOR.R, 193.2639(b) (193.2635(e), 193.2639(a))**  
 Question Text *Do records show that internal corrosion monitoring devices were checked twice per calendar year, not to exceed 7.5 months?*  
 Assets Covered **85654 (1941)**  
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**

## **TD.GEN: Time Dependent Threats: General**

101. Question Result, ID, References **Sat, TD.GEN.CORROSION.R, 193.2639(b) (193.2625(a), 193.2625(b))**  
 Question Text *Do records show that components that can be adversely affected by corrosion are identified, and protected, or inspected and replaced?*

Assets Covered 85654 (1941)

Result Notes System description facilities that require CP and coatings

## TQ.OO: Operator Qualification

102. Question Result, ID, References Sat, TQ.OO.OMQUAL.R, 193.2719(a) (193.2707(a), 193.2707(b))

Question Text *Do records show that operations and maintenance of components was conducted by personnel who met the qualifications and training requirements?*

Assets Covered 85654 (1941)

Result Notes Reviewed OQ records for personnel

All employees current

103. Question Result, ID, References Sat, TQ.OO.OMQUAL.O, 193.2707(a) (193.2707(b))

Question Text *Do individuals conducting operations and maintenance of components demonstrate their capability to perform their assigned functions?*

Assets Covered 85654 (1941)

104. Question Result, ID, References Sat, TQ.OO.CORRCONTRPERS.R, 193.2719(a) (193.2707(c))

Question Text *Do records demonstrate that personnel who perform corrosion control, or supervise unqualified individuals, are qualified in corrosion control technology?*

Assets Covered 85654 (1941)

Result Notes Josh Eilts from NCL performs annual corrosion inspections

CP 3 Technologist Expires 8/23/2025

105. Question Result, ID, References NA, TQ.OO.CORRCONTRPERS.O, 193.2707(c)

Question Text *Do individuals conducting, or directing, corrosion control activities demonstrate adequate skills and knowledge?*

Assets Covered 85654 (1941)

Result Notes No corrosion personnel were on site during the inspection. Tacoma LNG hires a contractor to perform corrosion control testing

106. Question Result, ID, References Sat, TQ.OO.PERSONHEALTH.R, 193.2711

Question Text *Do records show that the health and physical condition of personnel assigned operations, maintenance, security, or fire protection duties have been evaluated?*

Assets Covered 85654 (1941)

Result Notes Supervisor training for drug and alcohol awareness

107. Question Result, ID, References Sat, TQ.OO.TRAINOM.R, 193.2713(a) (193.2719(a), 193.2719(b))

Question Text *Do records show that operations, maintenance, and supervisory personnel have received the mandatory initial training?*

Assets Covered 85654 (1941)

108. Question Result, ID, References Sat, TQ.OO.RETRAINOM.R, 193.2713(b) (193.2719(a))

Question Text *Do records show that operations, maintenance, and supervisory personnel received refresher training every two years?*

Assets Covered 85654 (1941)

Result Notes Viewed records for OQ task, retraining scheduled two years after initial

No retraining has occurred

109. Question Result, ID, References Sat, TQ.OO.TRAINSECURITY.R, 193.2715(a) (193.2719(a))

Question Text *Do records show that security personnel received mandatory initial training?*

Assets Covered 85654 (1941)

110. Question Result, ID, References Sat, TQ.OQ.RETRAINSECURITY.R, 193.2715(b) (193.2719(a))

Question Text *Do records show that security personnel received refresher training every two years?*

Assets Covered 85654 (1941)

Result Notes Re-training has not occurred yet, only initial training.

Tacoma LNG initially had the re-training interval set to 3 years but after discussion with staff they have changed it to 2 years

## TQ.TR: Training of Personnel

111. Question Result, ID, References Sat, TQ.TR.TRAINFIREPROT.R, 193.2717(a) (193.2717(a)(1), 193.2717(a)(2), 193.2717(a)(3), 193.2717(c), 193.2719(a), 193.2719(b))

Question Text *Do records show that operations, maintenance, and supervisory personnel have been adequately trained in fire protection, including plant fire drills?*

Assets Covered 85654 (1941)

Result Notes Initial training for procedures, fire training, fire extinguishers

Drills completed 3/3/21, 8/27/21, June 2022 (4 sessions throughout month)

Incorporating What-If drills during monthly safety meetings

112. Question Result, ID, References Sat, TQ.TR.RETRAINFIREPROT.R, 193.2717(b) (193.2717(c), 193.2719(a), 193.2719(b))

Question Text *Do records show that operations, maintenance, and supervisory personnel received refresher fire protection training every two years, including plant fire drills?*

Assets Covered 85654 (1941)

Result Notes CBTs completed annually for fire extinguishers and every two years for fire fighting procedures

Drills completed periodically

113. Question Result, ID, References NA, TQ.TR.FIREDRILLS.O, 193.2717(c)

Question Text *Do personnel demonstrate adequate fire protection skills during a fire drill?*

Assets Covered 85654 (1941)

Result Notes No such activity/condition was observed during the inspection.

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