

Washington Utilities and Transportation  
Commission Intrastate Propane/Air Peak Shaving  
System Inspection Guide and Report – Form E

Inspection ID: 6197

Operator Name: Puget Sound Energy (PSE)

Company Official Name: Ms. Booga Gilbertson (Sr VP Operations)

Address: P.O. Box 90808 M/S PSE-12N

City: Bellevue WA 98009-0868

Telephone: (425)462-3696

FAX: (425)462-3300                      Emergency: (800) 552-7171

**District or Division Office Inspected**

Name: D.W. Swarr Propane-Air Plant

Address: 2100 Benson Drive South

City: Renton, WA 58055

Telephone: (253)395-6995

**Operator Representative**

Name and Title: Darryl Hong, PSE, Compliance Program Coordinator

Name and Title: Greg Lillehaug, PSE, Operator

**WUTC Representative**

Name and Title: Lex Vinsel, WUTC, Pipeline Safety Engineer

Name and Title: \_\_\_\_\_

Inspection Dates: June 15-18, 2015

Date of Last Inspection: July 22-26, 29-31, 2013

Amendments 192-87, 192-82, 192-88

**PROPANE SYSTEM HISTORY**

Age (Range): 1965, 1974, 1996 Size (Range): 2-inch to 10-inch  
Material Type: Steel A-106B Specifications: A-106B Seamless  
Miles of Main: 0 Number of Services: 0  
Number of Leaks (Main): N/A (Service): N/A  
Leaks Scheduled for Repair: 2013 8 existing /repaired 4 - (Above Ground Piping Only)  
- 2014 3 existing / repaired 1  
Unaccounted for Gas: negligible  
Period Ending: Monthly Inventory Reports for accountability of the gas  
Pipeline Class locations: Class 3  
Number of Gas Department employees: Four (4) total  
Propane Supply Company: Turner Propane & Ferrel Gas

**REPORTING REQUIREMENTS**

- 1. Telephonic notice of incidents and written reports filed with WUTC as required? (191.5, 192.615 & WAC 480-93-200 & 210) **[PSE OS 2650.1000 §3.1.]**  
N/A - No incidents during time frame.
- 2. Annual Gas Distribution reports filed with WUTC as required? (WAC 480-93-010 & 200 & 191.11)  
N/A – The Propane Air Plant is not part of the distribution system
- 3. Safety-related conditions reports filed with WUTC as required? (191.11, 480-93-010, & 200)  
N/A – No SRCRs
- 4. Pipeline and system pressure reports filed with WUTC as required? (WAC 480- 93- 200) are they required to submit based on WAC 480?
  - a. Which exceed the established MAOP?  
No - None
  - b. When raising pressure above 250 psig?  
No - None
  - c. When raising pressure above 500 psig?  
No - None
  - d. When pressure drops below a safe operating condition?\_  
No - None

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- e. When a pipeline (250 psig or more) is taken out of service?  
No-None/No pipeline taken out of service.

### **Liquefied Petroleum Distribution Systems** **PART 192 & NFPA 59**

*National Fire Protection Association (NFPA) applies to utility Liquefied Petroleum (LP) gas systems to the point where LP-Gas or a mixture of LP-Gas is introduced into the utility distribution system as required by NFPA 59. Title 49 CFR 192 and ~~WAC 193~~ NFPA 59 (2004) cover those portions of the LP Gas systems downstream of the unloading equipment, containers, vaporizer, and interconnecting piping.*

*Installations that have storage containers with an equivalent water capacity of 4000 gal or less will conform to NFPA 58 Standard. (PSE Summer Only)*

### **GENERAL PROVISIONS**

5. Are employees trained annually in handling, transferring, and operating procedures for LP Gas and are training documents available? (NFPA 59 2004 4.1)  
Yes, reviewed training records for EOP, propane properties, transfer, safe handling for 2013 and 2014. Reviewed Properties and Safe Handling Training Manual 2014.

### **LP-GAS ODORIZATION**

6. Is the gas odorized to 1/5 LEL? (NFPA 59 2004 4.2) (PSE GOS 2650.1000 §3.1.2 GFP 4675.1000)  
All of tanks are checked yearly for odorant level. All records were ok for 2013-2014.  
NOTE: PSE tests 6 tanks a year using ISMELL 1000 to confirm that odorant levels in the liquid propane are at least 22 ppm equivalent to 1 lb ethyl mercaptan per 10,000 gallons of propane.
7. Are procedures available for odorization? (192.625)  
Yes, they normally odorize when the levels from the ISMELL are not adequate. GOS 2650 .1000 GFP 4675.2000
8. Chemical properties or brand name?  
Ethyl Mercaptan
9. Odorization method?

They buy product (propane) already odorized.

10. Operator conducted periodic sampling?  
Yes, monthly three (3) tanks are tested and verified test records that they test the product in tanks for adequate odorant. (ISMELL 1000, see #6 above)

*Note: Gas must be odorized by the addition of a warning agent of such character that they are detectable, by a distinct odor, down to a concentration in air of the lower limit of flammability. Propane has a flammability range of 2.2 to 9.5% gas in air.*

11. Are containers and equipment protected from damage from vehicles by posting warning signs, devices, barricades, or other means? (NFPA 59 2004 4.4)

Yes, bollards, jerry walls, and crash gates appear to be properly positioned.

12. Is there adequate lighting that will provide illumination to the operating facilities for walkways, essential control valves, and loading and unloading facilities?

(NFPA 59 2004 4.6)

Yes, Area is well lit.

13. Is smoking and non-process ignition sources within the protective enclosure prohibited? (NFPA 59 2004 4.8.1)

Yes, Safety & Informational Handout § 25 p.111 & Appendix C O&M 25.7, 25.7.1, 27.4.1, Appendix F Tailgate Meeting Form

14. Is smoking permitted only in designated and properly signposted areas? (NFPA 59 2004 4.8.2)

Yes smoking only permitted outside SW of engine building. Appendix C – Safety and Informational Handout O&M (see above O&M 25.7)

15. Are vehicles and other mobile equipment that constitute potential ignition sources prohibited within diked areas or within in 50 ft (15 m) of containers of LP- Gas? (NFPA 59 2004 4.8.4)

*Note: An exception for vehicles specifically authorized and under constant supervision or where loading or unloading at facilities specifically designed for that purpose.*

Yes, (EOP 3.1.1.4) (O&M 18.6.4, 25.5, 2.5.3)

16. Is fixed electrical equipment and wiring installed in accordance with NFPA 70: (NFPA 59 2004 4.5.2.2\*, 4.5.2.4)

Yes, Installation in 1996 per code.

## **TRAINING**

17. Has annual training for persons that are responsible for the LP systems on (NFPA 59 2004 4.1, 13.1.4, 13.7.1, 13.1.1.8\*): (O&M Appendix B, Training Modules), (Appendix G, Sec. 5.2), (EOP, 4.6, p. 25)

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- The safe handling of LP
- Properties of LP
- Operating LP equipment
- Emergency procedures
- Records maintained
- Use of personal protective gear **NFPA 59 2004 13.7**

Yes, reviewed annual training records.

18. Is there suitable protective clothing and equipment available that would protect against the effects of frostbite and cold refrigerants? (**NFPA 59 2004 13.7.4, 13.7.5, 13.7.6, 13.7.7**) (EOP 4.7, 4.7.1, 5.3.3) (O&M Appx. F, Job Hazard Analysis)

Yes, visually inspected PPE

19. Are self-contained breathing apparatus provided for those employees who may be required to enter an atmosphere that could be injurious during an emergency? (**NFPA 59 2004 13.7.8, 13.7.9**)

No – Plant personnel will isolate and evacuate but PSE Emergency Response Truck and Fire Department would perform any firefighting function.

### **CONTAINERS**

20. Are containers located outside of buildings? (**NFPA 59 2004 5.4.1.1**)

Yes, All containers for LPG are outside any buildings.

21. Are containers designed, constructed, and tested in accordance with ASME Boiler and Pressure Vessel Code Section VIII “Rules for Construction of Unfired Pressure Vessels”? (**NFPA 59 2004 5.1.1**)

Yes, 1965 was the west bank of tanks, 1974 on the east bank of tanks.

22. Are Data Report Forms U or Form U-1A available (ASME Section VIII) (**NFPA 59 2004 5.3**)

Verified name plates to U1A Board Numbers for tanks 7-9.

23. Do containers have an accessible nameplate? (**NFPA 59 2004 5.3**)

Verified that the Name Plates were visible or transferred to above ground plates.

24. Are containers marked for use: Check data plate for “underground use?”

**X BELOW GROUND CONTAINER**       Aboveground

25. Water capacity in gallon U.S. Standard 4@28350, 9@86600, 20@30000  
Total 1,492,800 Gal

Pressure in psig MAOP 250 PSIG.

With the outside surface area in square  
feet

Tanks 7-10 SA 2050, Tanks 11-19, SA 4408, Tanks 20-39 SA 1685.

Wording "This container shall not contain a product having a vapor pressure in excess of Tanks 11-19 - 215 PSIG, Tanks 20-39 - 175 PSIG, (Tanks 7-10 do not list this information on data plate, board number matches U1A) PSIG at 100 degree F.

Maximum level to which the container may be filled at temperatures between 20 degrees F and 130 degrees F At 20 F fill the tanks to 85%, at 130 F they can filled to 103 %

### **Aboveground Containers**

26. Are horizontal aboveground containers supported on solid masonry, concrete, or steel supports? (NFPA 59 2004 5.5.1.2)  
N/A – No aboveground containers.

27. Are horizontal aboveground containers mounted on two saddles only and allow for expansion and contraction? (NFPA 59 2004 5.5.1.3)  
N/A – No horizontal aboveground containers

28. Are containers in contact with the saddles protected from corrosion? (NFPA 59 2004 2-5.1.4)  
N/A – No aboveground containers

29. Are containers properly painted and protected from the elements? (NFPA 59 2004 2-5.1.5s)  
N/A – No aboveground containers

30. Are containers located a minimum distance away from buildings, not associate with the gas plant, as follows: (NFPA 59 2004 Table 5.4.1.2)  
N/A – No aboveground containers.

Container Size	Minimum Distance	Between Containers
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2,001 to 30,000 gal	50 feet	5 feet (NFPA 59 Table 5-4.1.2)
30,001 to 70,000 gal	75 feet	1/4 of the sum of diameters of adjacent containers.

31. Are there multiple aboveground containers in a single location? (NFPA 59 2004 table 5.4.1.4)

N/A – No aboveground containers.

32. How many containers are in a single group? (NFPA 59 5.4.1.4)

*Note: see Table 5.4.1.4 for separation of groups of 6 and 9 containers*

Are there groups of containers? (NFPA 59 5.4.1.4)

N/A – No aboveground containers.

34. What type of fire protection is provided?

*Note: See NFPA 59 2004 Table 5.4.1.4 for distance and fire protection*

Hose Streams 3 hydrants

Fixed Monitor Nozzles

Fixed Water Spray

Insulation per 10-5.4.1

N/A - No aboveground containers.

35. Are there more than 6 containers in one group? If there are more than 6 containers in one group, what is the fire protection (NFPA 59 2004 5.4.1.3):

N/A – No aboveground containers

36. Are there more than 9 containers in one group? (NFPA 59 2004 5.4.1.3)

*Note: Containers shall be limited to 9 containers at a single location.*

N/A – No aboveground containers

37. Does the relief vent extend upward at least 7 feet above the top of the above ground container? (NFPA 59 10.8.1)

Yes, below ground tanks have vent stacks at least 7 feet tall.

### **Underground Containers**

38. Are there loose or piled combustible material or weeds within 25 feet of any container? (NFPA 59 2004 5.4.2.6); [O&M Chapter 28 §2.2, 28 §2.2.4]

No loose or piled combustible materials around tanks

39. Are containers located less than 50 feet from the nearest important building or

group of building or line of adjacent property that can be built upon? (NFPA 59 2004 5.4.2.4 (1), (2))

No buildings within the restricted area.

40. Has the container relief valve been sized to meet the requirements of ~~NFPA 59 Appendix E Table E-1~~ Annex D Table D-1 or other standard? (NFPA 59 2004 6.8.2, 10.2.3, 10.2.5) Relief VALVES have enough capacity as shown in Manufacturing Tech book for Part# A3149MG  
Yes, reviewed formula and manufacturers CFM ratings.

### **PIPING, VALVES, AND EQUIPMENT**

41. Pipe specification  
ASTM A106 Grade B Schedule 40 and 80 seamless pipe
42. Valve specification  
ANSI 300 flanges and Jamesbury ball valves.
43. Hose connection specification  
N/A – Tanker trucks bring their own hoses for transfer/offload. They do a visual check per Procedure 4.3, Truck Loading and Unloading Procedure Checklist 18.1.5.
44. Does all piping conform to NFPA 59? (NFPA 59 2004 7.1.1.1) List the pipe standards to which it was manufactured.  
Yes, in 1996 valves and piping were brought up to standards of ASME B31.3 and put back INTO SERVICE.
45. Are pipeline installed to provide for expansion, contraction, jarring, vibration, and settling without damage?(NFPA 59 2004 7.1.8\*)  
Yes, Field verified with Greg L that the pipeline supports were per Support Drawing #5161 s2 , s4, “Tank Piping Anchor Supports “
46. Are pipe and connections leak tight and have they been leak tested? (NFPA 59 2004 7.1.7)  
In 2001 pressure tests were performed on all piping systems. All piping is the same as when the pressure test was performed in 2001. Test records were reviewed and verified 2001 (Kuang C).
47. Is the piping connection to the container for sizes over 2 inches made by welding or with welded flanges? (NFPA 59 2004 7.1.2)  
Everything above 2-inch is welded. Field verified that all pipe above 2-inchs was welded.
48. Are cast-iron valves in use that carry LP gas? (NFPA 59 2004 7.1.3)

N/A No cast-iron on site

49. Are gaskets used to retain LP-Gas in flanged connection in piping made of metal or other suitable material with melting point over 1500 degrees F? Are the gaskets replaced whenever the flange is opened? (NFPA 59 2004 6.3.3.5, 7.1.6) [O&M 24.1.2]

Yes, Metal gaskets, every gasket is a metal gasket designed to withstand 1500 degrees F.

### **VAPORIZERS, HEAT EXCHANGERS, AND GAS-AIR MIXING**

50. Are vaporizers designed and constructed in accordance with the ASME Code and marked as follows: (NFPA 59 2004 9.3.3)

- a. Outside surface area in square feet  
1748 square feet (Unit is 16 ft long.)
- b. Area of the heat exchange surface in square feet  
1748 square feet
- c. Maximum vaporizing capacity in gallons per hour  
9200 gallons per hour
- d. Rated heat input in Btu/h  
10.5 mmbtu/hour 10.5 million-btu/hour
- e. Name or symbol of the manufacturer  
Sam Dick's Industries's

51. Is the vaporizer:

- Indirect vaporizer
- Direct-fired vaporizer
- Water bath

**Note: Water bath vaporizers are best covered in Section 9.3.7 of NFPA 59 2004.**

52. Is there a manual gas burner valve? (NFPA 59 2004 9.5.2.3)

Yes, There is a main valve that shuts off the gas supply to the burners.

53. Is there a limit control to prevent the heater from raising the product pressure above the design pressure of the direct-fired vaporizer or container? (NFPA 59 2004 9.3.6)

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N/A – Vaporizers are not direct-fired.

54. Is there a relief valve installed to prevent raising the product pressure above the design pressure of the direct-fired vaporizer **OR INDIRECT OR WATER BATH VAPORIZER (NFPA 59 2004 10.9.1)**  
Three (3) relief valves set at 375 PSIG; MAOP of vaporizers is 400 PSIG.

### **RELIEF DEVICES**

55. Is the relief device marked with **(NFPA 59 2004 10.1.3)**:
- a. pressure (in psig) at which the device is set to start to discharge  
250 PSIG FOR THE TANK RELIEF VALVES.
  - b. Actual rate of discharge in cu ft per min of air at 60°F and 14.7 psia  
Each relief valve rating is 9,250 CF/M. Rego Multiport A8570 rating of 27,750 CFM.
  - c. Manufacturer's name  
Rego and MEC
  - d. Catalog number  
Rego 3149MG  
MEC MEV250VM
56. Is the relief device connected to the vapor space of the container? **(NFPA 59 2004 10.2.10(3))**  
Yes, multi-port to the vapor space nozzle of the tank
57. Are there any restrictions or valves in the relief device discharge vents? **(NFPA 59 2004 10.3.2, 10.6.2)**  
No, weather caps are installed on all reliefs.
58. Are discharge vents from the relief valves installed in such a manner: **(NFPA 59 2004 10.6.1)**
- lead to the open air
  - Be protected against mechanical damage
  - Have rain caps or other device to exclude moisture
- Yes, Visually inspected rain caps.
59. Are discharge vents from the relief valves or common discharge headers shall be installed in such a manner as to discharge in an area that will: **(NFPA 59 2004 10.6.2 (1), (2), (3))**
- prevent possible flame impingement on containers, piping, equipment, and

structures.

- Prevent possible vapor entry into enclosed spaces
- Be above the heads of personnel who can be on the container or adjacent containers, stairs, platforms, or ground
- Be above the possible water levels, if from underground containers where there is a possibility of flooding.

Yes, Discharge vents comply with requirements.

60. Have relief devices been tested for proper operation at intervals not exceeding five years? (NFPA 59 2004 10.1.4) [O&M 35.2]

Yes, Relief Valves 3149MG and MEV250VM are sent back to manufacturer and the manufacturer exchanges the cores. Valve cores are tested every 5 years.

## **HANDLING**

### **Transfer Of Liquids Within A Utility Plant**

61. Are transfer personnel familiar with the properties of the material and instructed in transfer and emergency procedures? (NFPA 59 2004 11.2.1.3) [O&M 22.0, 23.0, 18.0, Appendix B Training, EOP 2.2.1, 2.3, Table 3A, 3.1.1.3]

Yes, reviewed training material and test records.

62. Is at least one competent person in attendance during the entire period of transfer is from the time connections are made until the transfer is completed, shutoff valves are closed, and lines are disconnected?

(NFPA 59 2004 11.2.1.3) [O&M 4.3, 18.1, 18.2, 18.3; EOP 5.2.2]

Competent person is always in attendance during transfer.

### **Transfer Procedures**

63. Does the operator have for each facility procedures for: [Chapter 40 of O&M and Truck Unload Section 18]

- Verification of connections to ensure proper delivery of gas
- Tightness of connections
- Hoses and fittings inspection
- Valve sequencing
- Disconnection procedures
- Purging procedures
- Normal transfer operations
- Emergency transfer operation

Yes, Reviewed operating procedures for above requirements.

64. Are provisions implemented to prevent moving of tank vehicles during transfer? (NFPA 2004 11.2.4.3) [O&M 4.3, 18.1.2]  
Yes, reviewed truck unloading procedure for provisions.

### **OPERATIONS (NFPA 59 2004 Chapter 11)**

65. Does each facility have a written operating procedures manual covering (NFPA 59 2004 11.1.1)

- Startup
- Shut down
- Operations
- Actions to be taken if flammable concentrations of liquids or gases are detected (NFPA 59 2004 11.1.2) using fixed detectors, portable detectors, operating malfunctions, and human senses. [O&M Section §3.9 page 11, O&M §5.3]
- Purging and inerting equipment [O&M Chapter 40 & 34]
- Vaporizers
- Refrigerated liquid (if applicable)  
Yes, see listed O&M sections.  
[O&M Section 19, 3.0, 4.0, 9.0, 9.2, 10.2, EOP §1.0, 4.1]

66. Does each utility gas plant have first-aid materials on hand in sufficient quantity to handle a reasonably anticipated emergency? (NFPA 59 2004 13.7.2)  
Yes, two (2) First Aid kits including Burn materials in appropriate locations.

67. Are records of all operating log sheets and recorded data retained for at least 5 years? (NFPA 59 2004 11.3.2)  
NO, no propane air injection into 192 side of system since 2010, Reviewed test runs for 2007-2009.

### **MAINTENANCE**

68. Are maintenance manuals for all equipment available to maintenance personnel? (NFPA 59 2004 12.1.1)  
Yes, Maintenance manuals are available in operating room.
69. Do the maintenance manuals include the following: (NFPA 59 2004 12.1.3, 1-4)
- Drawings, procedures, and parts lists
  - Preventative maintenance procedures and schedules
  - Routine inspections to be performed

- Corrosion inspection and corrosion control procedures
- Maintenance of fire protection equipment (NFPA 59 2004 12.2)

Yes, reviewed maintenance records.

70. Is each auxiliary power source tested at least monthly to verify its operational capacity? (NFPA 59 2004 12.3)

Tested Auxiliary Generator Hours 83.4 - 87.8 hours on 5/17/2015.

71. Is all equipment containing flammable or hazardous materials purged in accordance with NFPA 59 2004 prior to beginning maintenance procedures? (NFPA 59 2004 11.1.4\*, 12.4)

Yes, Reviewed Purging Procedure [O&M 34.2]

72. Are records of all maintenance log sheets of process equipment maintained for the life of the equipment, while in use, and for 3 years thereafter? (NFPA 59 2004 12.5.1, 12.5.2)

All records of maintenance are in the maintenance database. Also reviewed log sheets 2007-2009 for 5 year retention.

### **FIRE PROTECTION, SAFETY, AND SECURITY**

73. Has a plan for firefighting been developed?

Yes, EOP and City of Renton Fire Department.

- a. Does it address: (NFPA 59 2004 13.1.1\*)

Yes, [EOP p. 59, Hazardous Materials Release Checklist]

- b. Does it address water supply per (NFPA 59 2004 13.4.1) and Portable or wheeled extinguishers available at strategic locations (NFPA 59 2004 13.5.1)

Yes, SWARR facility has portable extinguishers available. [O&M 3.3.2.2, 27.6, 31.1.2, 31.3, 33.5] [EOP 2.6]

Note: The evaluation must be based on the type, quantity, and size of storage containers; an analysis of local conditions; hazards within the facility; and exposure to and from other property. The evaluation shall consider: local agency response times; type, quantity, and location of equipment needed for the detection and control of potential nonprocess and electrical fire; protection of equipment and structures; fire protection water systems; fire extinguishers; automatic shutdown equipment; availability of plant personnel; and protective equipment and special training by individuals for emergencies. See NFPA 59 2004 13.1.1\* for detailed requirements.

74. Has a detailed emergency procedures manual been prepared and include (NFPA 59 2004 13.1.3(A)): [EOP Section 2.6.1]
- Shutdown or isolation of equipment to ensure that the escape of gas or liquid is promptly cut off or reduced as much as possible
  - Use of fire protection [EOP §2.6.2 - 2.6.6]
  - Notification of public authorities [EOP §4.9]
  - First aid [EOP 6.0]
  - Duties of personnel [EOP §5.3.2]
- Yes, reviewed procedures.
75. Has the emergency procedures manual been reviewed and updated at least annually? (NFPA 59 2004 13.1.3(C))  
Yes, manual is updated annually. 2013-2014
76. Is the manual kept readily available in the operating control room or at a constantly attended location (if the plant site is not continuously manned)? (NFPA 59 2004 13.1.3(B) PSE SWARR EOP 14-1, Effective on 10/01/2014)  
Yes, Emergency Operating Plan (EOP) inside the control room.
77. Has firefighting plan been reviewed with the local emergency response personnel (Fire & Police)?  
Yes, City of Renton Fire Department had safety training for 37 Fire fighters during November 2013. (see 73 above)

### **Fire and leak detection**

78. Are flammable gas detections systems used at a constantly attended location? *If not continuously monitored, will the alarm detect at not more than 25% LEL (0.525% gas in air) in accordance with (NFPA 59 2004 6.5.9.2, 13.2.2, 13.2.3, 13.2.4\*)*  
No, this is not a constantly attended location.
79. Do fire detectors alarm at the plant site and at a constantly attended location if the plant site is not manned continuously? (NFPA 59 2004 13.2.2, 13.2.3, 13.2.4\*)  
Yes, tested two (2) fire eyes and two (2) gas detectors within the plant. All alarmed and were reported back from a remote location. (Red Hawk Security)
80. Is there a maintenance program for all plant fire protection equipment? (NFPA 59 2004 12.2, 13.6)
- Fire detectors alarm (NFPA 59 2004 13.2.4\*)
  - Flammable gas detections Combustible Gas Detector (CGD's) & Ultraviolet-Infrared (UVIR's) (NFPA 59 2004 13.2.3)

- Water supply equipment three (3) hydrants (NFPA 59 2004 13.1.1, 13.4.)  
Yes, observed alarm and reset of alarms.

### **Personnel Safety**

81. Is there suitable protective clothing and equipment available that would protect against the effects of frostbite and cold refrigerants? (NFPA 59 2004 13.7.4)  
Yes, inspected PPE just inside big roller door.
82. Are self-contained breathing apparatus provided for those employees who may be required to enter an atmosphere that could be injurious during an emergency? (NFPA 59 2004 13.7.8)  
No – Plant personnel will isolate but PSE Emergency Response Truck and Renton Fire Department would perform any firefighting function.
83. Are portable flammable gas detectors readily available? (NFPA 59 2004 13.7.10)  
Yes, two (2) flammable gas detectors are calibrated and on site.

### **Security**

84. Is there a security system in place with controlled access to unauthorized personnel? (NFPA 59 2004 13.8.1)  
Yes, fencing and automatic gates and locked gates surround the Facility.
85. Are the containers and LP equipment enclosed by a protective fence, wall, or barrier? (NFPA 59 2004 13.8.2)  
Yes, fencing and barriers appear adequate.
86. Are there at least two exit gates provided for rapid escape? (NFPA 59 2004 13.8.4)  
Yes, Two (2) man-gates are positioned at major exits.
87. Is there lighting in the vicinity of protective enclosures to promote security? (NFPA 59 2004 4.6, 13.8.6)  
Yes, lighting appears to be adequate.

### **Operation and Maintenance 49 CFR 192 & WAC 480-93**

88. Procedures available for Valve maintenance? (192.747)  
Yes, PSE O&M §32

89. Have valves which might be required during an emergency been checked and serviced at intervals not exceeding 15 months, but at least once each calendar year?  
Field verified valve operations with Derek Kane, checked the HV 104 liquid valve on tanks 7,8,9.
90. Procedures for Leakage Surveys? (192.723 WAC 480-93-186, WAC 480-93-187 & WAC 480-93-188)  
Survey & Analysis (S&A) do leak surveys annually, checked records and OQ of technicians.
- a. Have business district been identified?  
N/A – no business districts in plant site.
- b. Have gas detector surveys been conducted in the business districts at intervals not exceeding 15 months, but at least once each calendar year?  
N/A – no business districts in plant site.
- c. Have leakage surveys of the distribution system outside of the principal business areas been conducted as frequently as necessary, but at intervals not exceeding 5 years?  
N/A – no business districts in plant site.
- d. Has the operator provided for calibration (propane) and maintenance of leak detection instruments?  
Yes, reviewed onsite gas detector calibration.
- e. Have leakage surveys of cast iron, wrought iron, ductile iron, or non-cathodically protected steel pipe been conducted at intervals not exceeding eight months, but at least twice each calendar year?  
N/A – No, above conditions do not occur on plant site. All pipeline is cathodically protected (CP) and reviewed CP records
91. Procedures for Leak Repairs? (192.703 & WAC 480-93-18601)  
Yes, See GOS 2675.1200
- a. Have leaks been classified Grade 1, Grade 2 or Grade 3?  
Yes, they grade leaks by GOS 2675.1200 which pertains to Propane leaks, PSE uses a Grade A-C classification that parallels Grades 1-3.
- b. Have Grade 1 leaks been repaired or eliminated or continuous action taken as required? (Class A)  
N/A – No class A leaks at plant site.
- c. Have Grade 2 leaks been repaired or cleared within 15 or 21 months?

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\_\_\_\_\_ Yes, Grade 2 (B) leaks are repaired within 15 months

- d. Have Grade 2 leaks been reevaluated at least once every 6 months?  
\_\_\_\_\_ Grade 2 (B2) leaks are reevaluated every 6 months, repaired within 15 months.
- e. Have Grade 3 leaks been reevaluated within 15 months?  
\_\_\_ Yes, Grade 3 (C) leaks evaluated within 12 months.

92. Has the Maximum Allowable Operating Pressure (MAOP) been established for the 49 CFR 192 defined pipeline? (192.619, 192.621, 192.623 & WAC 480-93-183)

\_\_\_\_\_ MAOP is 250 downstream of station exit valve.

93. Procedures for Inspecting and Testing Regulating Stations? (192.739 - .743)

\_\_\_\_\_ N/A This does not apply to Propane Air Plants.

a. Have regulating stations been inspected at intervals not exceeding 15 months, but at least once each calendar year?

\_\_\_\_\_ N/A - This does not apply to Propane Air Plants.

b. In good mechanical condition?

\_\_\_\_\_ N/A This does not apply to Propane Air Plants.

c. Adequate from the standpoint of capacity and reliability of operation?

\_\_\_\_\_ N/A This does not apply to Propane Air Plants.

d. Set to function at the correct pressure?

\_\_\_\_\_ N/A This does not apply to Propane Air Plants.

e. Properly installed and protected from dirt, liquids or other conditions that might prevent proper operation?

\_\_\_\_\_ N/A This does not apply to Propane Air Plants.

94. Procedures for Testing Relief Valves? (192.743)

\_\_\_\_\_ N/A - This does not apply to Propane Air Plants.

a. Have relief devices (RV) been tested at intervals not exceeding 15 months, but at least once each calendar year?

\_\_\_\_\_ N/A This does not apply to Propane Air Plants.

b. Have RV sufficient capacity?

\_\_\_\_\_ N/A This does not apply to Propane Air Plants.

c. Have RV been set at the proper set point?

\_\_\_\_\_ N/A This does not apply to Propane Air Plants.

95. Telemetering or Recording Gauges (192.741)  
N/A This does not apply to Propane Air Plants.
- a. Is there a pipeline system supplied by more than one district regulating station?  
N/A - This does not apply to Propane Air Plants.
- b. Are there telemetering or recording gauges installed?  
N/A - This does not apply to Propane Air Plants.
- c. Are there any indications of abnormally high or low pressure?  
N/A - This does not apply to Propane Air Plants.
- d. Are unsatisfactory operating conditions being corrected?  
N/A - This does not apply to Propane Air Plants.
96. Procedures for Damage Prevention (192.614, WAC 480-93-190 & RCW Title 19.122)  
Yes, see company PSE Damage prevention Program.
- a. Written damage prevention program available?  
Yes, see company PSE Damage Prevention Program
- b. Member of a one-call system?  
Yes, see company Damage prevention Program
- c. Does the operator have available a current list of Excavators?  
Yes, see company Damage prevention Program
- d. Provide notification concerning the program to the public and excavators?  
Yes, see company Damage prevention Program
- e. Provide means for receiving and recording notification of pending excavations?  
Yes, see company Damage Prevention Program
- f. Provide for markings within two business days?  
Yes, see company Damage Prevention Program
- g. Provide for follow up inspections of the pipeline where there is reason to believe the pipeline could be damaged?  
Yes, see company Damage Prevention Program
97. Does the operator have a comprehensive public education program, which

includes customers, the public, appropriate government and excavators, which teaches them how to recognize and report a gas pipeline emergency? (192.616)

Yes, see PSE Public Awareness Program. Reviewed at SWARR Station

Comments – Form E, rev 8-29-02. For Corrosion they showed me the CP readings and the readings taken from the two rectifiers that affect this station for 2013-2014. For the acceptance criteria for this facility they use the 100 mv shift. Rectifiers are inspected for proper operation every two months and CP sites are checked for CP protection every year.

Reviewed atmospheric corrosion during field inspection and reviewed atmospheric inspections for 2014. (every 3 years).

Reviewed Public Awareness letter that is sent out for areas around the SWARR plant.

OQDB updated with Field Inspection for Propane – Air on 7/14/2015

GFP – Gas Field Procedure

GOS – Gas Operating Standards