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August 13, 2021

VIA ELECTRONIC MAIL

Mark Marini, Secretary
Department of Public Utilities
One South Station, 5th Floor
Boston, MA 02110

Re: Bay State Gas Company d/b/a Columbia Gas of Massachusetts – D.P.U. 19-140
Compliance Agreement Consent Order Requirements (20) and (21).

Dear Mr. Marini:

Pursuant to the Consent Order, and associated Compliance Agreement, dated August 14, 2020, between the Pipeline Safety Division (the "Division") of the Massachusetts Department of Public Utilities (the "Department") and Bay State Gas Company d/b/a Columbia Gas of Massachusetts ("Bay State Gas") in the above-captioned matter, Eversource Gas Company of Massachusetts d/b/a Eversource Energy ("EGMA" or the "Company")[1] hereby provides the following response to address the requirements of Items 20 and 21 of the Consent Order.

Compliance Agreement Requirement (20):

Within 180 days of the effective date of this Order, CMA shall self-audit all LNG facilities and document areas where maintenance and training record are missing in accordance with the records retention requirements of 49 C.F.R. Part 193, § 193.2639 and § 193.2719, and include such documentation in the records for future review.

Company Response:

In August 2020, Bay State Gas entered a contract with Sanborn Head to audit the maintenance and training records of its Easton, Marshfield, Ludlow, and Lawrence LNG facilities (together the "LNG Facilities") for the years 2015 through 2019. To support the audit, Bay State Gas provided records of all repetitive maintenance tasks at each facility, for the years being reviewed. Sanborn Head also made site visits to each of the LNG facilities.

[1] On October 7, 2020, the Department approved the sale of the business of Bay State Gas to Eversource Energy. The closing on that sale occurred on October 9, 2020. Following closing of the sale, EGMA began serving customers in Bay State Gas' service territory and operating Bay State Gas' facilities, and provides this filing today for the Department's consideration.

Upon the conclusion of the audit, Sanborn Head produced a summary document, included as Attachment 19-140-20(a) as well as a document for each facility, included as Attachment 19-140-20(b). Within the summary document, fifteen recommendations were made to assist the Company in efforts to improve the facility record keeping. Table 1, below, provides a description of how the Company is addressing each of the recommendations, as well as a status update. The audit, the resultant recommendations, and implementation plans associated with those recommendations are also included in the scope of the Comprehensive Safety Assessment & Implementation Plan, and will be reported on both in the initial filing made to the Department on September 1, 2021, and in progress reports to be provided every six months through 2028 pursuant to the Settlement Agreement approved by the Department in D.P.U. 20-59.

Table 1 – Recommendations and Status

Recommendation	**Status**	**Comments**
Update the Process Flow and Piping & Instrument Diagrams for all facilities to current conditions to meet the intent of NFPA 59A.	In Progress	The Company is working with Sanborn Head to update the Process Flow and Piping & Instrument Diagrams at the Marshfield and Lawrence LNG facilities. The Company has received proposals for completing the diagrams for the Easton and Ludlow LNG facilities. The final diagrams for all four facilities are expected to be complete by the end of the second quarter in 2022.
Confirm the site plan, electrical area classification, and hazard detection/fire protection plan drawings are representative of current conditions.	In Progress	The Company hired a contractor (CH IV) to complete the electrical area classifications. The Company has also received a proposal from Blue Engineering to complete the hazard detection and fire protection plan drawings. The expected completion of these drawings is December 2021.
Develop a plan to improve the required corrosion protection record keeping so the LNG facility has access to the records that are maintained by the corrosion department.	Completed	The Company has implemented a local paper system of record for corrosion protection at each of the LNG facilities. Additionally, the scheduling of corrosion related inspection will also become a managed activity within the Company's maintenance management process.

Recommendation	**Status**	**Comments**
Develop and maintain a plant employee list at the facility, including hire and termination date, to allow confirmation of initial and every two-year training for the duration of employment, plus two years.	In Progress	In addition to a local system of record at each LNG facility, the Company is in the process of developing a matrix within Excel, which will be used moving forward to track hire and termination date, and allow confirmation of initial and every two-year training.
Improve plant access or ease of obtaining records for employee OQ training records for employees performing corrosion related tasks at the LNG facility.	Completed	The Company has contracted out the performing of corrosion related tasks at EGMA;'s LNG facilities to Mass Tank. Resulting reports will then be reviewed by a qualified member of the Company's corrosion department.
Identify in the plant maintenance manual or procedures how to document/record when components are taken out of service when their respective safety devices are taken out of service for maintenance.	In Progress	The Company has engaged Sanborn Head to complete a revision of the maintenance manual. This recommendation will be addressed as part of the revision.
Identify in the plant maintenance manual or procedures how to document/record confirmation that a minimum amount of fire control equipment is taken out of service at any one time and returned to service in a reasonable period of time.	In Progress	The Company has engaged Sanborn Head to complete a revision of the maintenance manual. This recommendation will be addressed as part of the revision.
Identify in the plant maintenance manual or procedures how to document/record qualified company or contracted personnel perform each maintenance task.	In Progress	The Company has engaged Sanborn Head to complete a revision of the maintenance manual. This recommendation will be addressed as part of the revision.
Identify and execute plan to conduct an annual generator capacity test under full plant load or	Completed	The Company has created a regularly scheduled task within its work management system to conduct an

Recommendation	**Status**	**Comments**
alternate load test to meet requirements of 49 CFR 193.2613 and NFPA 59A 11.5.1.4, 11.5.1.5.		annual generator capacity test under full plant load or alternate load test.
Update scheduled maintenance tasks to ensure compliance with codes and the plant maintenance manual: fire protection control systems components, including manual pull stations, fire panel, and combustible gas detectors, tested at intervals not to exceed 6 months.	In Progress	The Company has compiled an inventory of all scheduled maintenance tasks and records, and has issued a purchase order to Sanborn Head to review the database. The review is expected to be done by the end of 2021. Upon the conclusion of the review, updates will be made as necessary.
Update scheduled maintenance tasks to ensure compliance with codes and the plant maintenance manual: process instrumentation.	In Progress	The Company has compiled an inventory of all scheduled maintenance tasks and records, and has issued a purchase order to Sanborn Head to review the database. The review is expected to be done by the end of 2021. Upon the conclusion of the review, updates will be made as necessary.
Update scheduled maintenance tasks to ensure compliance with codes and the plant maintenance manual: atmospheric corrosion inspections for above grade un-insulated and insulated piping.	In Progress	The Company has compiled an inventory of all scheduled maintenance tasks and records, and has issued a purchase order to Sanborn Head to review the database. The review is expected to be done by the end of 2021. Upon the conclusion of the review, updates will be made as necessary.
Update scheduled maintenance tasks to ensure compliance with codes and the plant maintenance manual: tank foundation surveys.	In Progress	The Company has compiled an inventory of all scheduled maintenance tasks and records, and has issued a purchase order to Sanborn Head to review the database. The review is expected to be done by the end of 2021. Upon the conclusion of the review, updates will be made as necessary.

Recommendation	**Status**	**Comments**
Develop or identify plan for where to save/upload test results for contractor performed maintenance tasks to improve record keeping and plant access or ease of obtaining records such as relief valve testing reports.	Completed	The Company has created a system of paper records that will be locally managed to track test results for contractor performed maintenance tasks.
Perform and document required fire drills at all facilities.	Completed	Documentation of fire drills at each facility is included in the Company's annual LNG Facility Fire Prevention filing.

Compliance Agreement Requirement (21):

Within 365 days of the effective date of this Order, CMA shall provide documentation to the Department showing that it has satisfied the requirements of Item 20.

Company Response:

Please refer to the Company's response to Compliance Agreement Requirement (20), Table 1, and Attachments 19-140-20(a) and (b) provided herewith.

Thank you very much for your attention to this matter. Please contact me with any questions.

Very truly yours,

Brendan P. Vaughan

Enclosures

cc: Laurie E. Weisman, Esq. – Hearing Officer
Service List, D.P.U. 19-140

SANBORN HEAD
Building Trust. Engineering Success.

Ray MacWhinnie
Eversource
157 Cordaville Rd.
Southboro, MA 01772-1802

1/19/21
File No. 4784.01/05

Re: Maintenance and Training Records Audit Summary – Easton, Marshfield, Ludlow & Lawrence LNG Facilities

Dear Ray:

Sanborn Head has completed the Maintenance and Training Records Audit of the Eversource Gas of Massachusetts (EGMA) Easton, Marshfield, Ludlow, and Lawrence LNG facilities for the years 2015 to 2019 when owned and operated by Columbia Gas of Massachusetts (CMA), a division of NiSource. The audit was conducted per the requirements of 49CFR193 and NFPA 59A, 2001 edition. The following provides a summary of the identified record gaps, additional observations, and a list of recommendations to assist Eversource in efforts to improve the facility record keeping. Please refer to the attached detailed facility audit documents for additional information.

IDENTIFIED RECORD GAPS

- Records are not available to provide evidence that components are taken out of service when their respective safety devices are taken out of service for maintenance. However, although records do not support, it does appear the required action occurs per the following:
    - Easton, Marshfield, and Lawrence plant personnel confirm they do lockout/tagout and isolate components when removing their safety devices from service for maintenance.
    - Ludlow plant personnel indicate that although the equipment/component in question is isolated and taken out of service, they do not record a lockout/tagout of the component or equipment protected by the safety device.
- For Easton & Marshfield, records are not available to support the requirement that a minimum amount of fire control equipment is taken out of service at any one time and returned to service in a reasonable period of time.
- Some gaps identified are related to the length of time for which records are required to be maintained:
    - Corrosion related records are not available for the life of the facilities, as required by 49 CFR 193. This should include all cathodic protection conducted by the corrosion department and atmospheric corrosion inspections conducted or coordinated by plant personnel.
    - Retention of initial and every two-year training records for the duration of employment, plus two years, are not available for all employees as identified

below. Other than the listed exceptions, detailed training records were available for all plant personnel every 2 years and no training gaps were noted.
    - Easton & Marshfield training records are only available from 1990 to the present date. One employee who retired within the last two years, and one current employee, began working at the Easton and/or Marshfield plants prior to 1990.
    - For Lawrence & Ludlow, employee start dates were not provided for employees, so verification of initial training was not possible. Additionally, the training binder for one former employee was not provided. It is unclear if this employee falls under the purview of this audit, because their employment termination date was not provided.
  - For Easton & Marshfield, OQ Training records for employees performing maintenance tasks were not retained prior to 2010. OQ Training records for employees performing maintenance tasks were not provided for Lawrence & Ludlow.
- Generator capacity tests are not performed under full plant load for Easton or Marshfield, as is required annually by 193.2613 (NFPA 59A 11.5.1.4, 11.5.1.5).
- Some gaps in plant maintenance records requiring a 5-year retention were identified. The maintenance record review was primarily based upon a review of the repetitive task (RT) records for each facility with plant daily inspection sheets filling in some gaps. Although most of the maintenance records appear to be present, indicating maintenance was largely performed as required by both CMA maintenance procedures and 49 CFR 193, there were some gaps identified for a limited number of items. The following provides a sampling:
  - Gaps in records for 1 year out of the 5 year required such as:
    - Easton
      - UV/IR checks missing for 2 months in 2015
      - Annual tank foundation survey record is missing for 2016
      - Annual safety valve inspections for two SVs are missing in 2017.
    - Marshfield
      - Monthly odorizer inspection missing for 1 month in 2015
      - Monthly vacuum pump test is missing for 1 month in 2015
    - Lawrence
      - Documentation/tracking of relief valve retirements/replacements via WMS indicates three relief valves are unaccounted for in 2019
      - Monthly fire extinguisher inspections are missing in 2015 and 2016
    - Ludlow
      - Annual safety valve inspections for five SVs are missing; three for 2018 only, and two for 2016 through 2019.
      - Monthly odorizer inspection missing for 1 month in 2015.

  - Manual pull stations do not appear to be tested. These should be tested at the same intervals as other fire protection control systems at the facilities, not to exceed 6 months.
  - The following fire protection control system components at Easton appear to be tested annually so do not meet the not to exceed 6-month requirement.
    - Fire panel
    - Combustible gas detectors
  - A variety of process instrumentation do not have records to meet the requirements of the CMA maintenance procedures such as orifice plates, and plant valves.
  - Tank foundation survey records were incomplete for Marshfield, Ludlow, and Lawrence.
    - Marshfield - No record of tank survey for2016, 2017, or 2018.
    - Ludlow – No records of tank survey for 2017.
    - Lawrence - No records for plant surveys were provided.
  - Completed commissioning forms for the generator replacement project in Ludlow were not provided. This is required by 193.2619(b) (NFPA 59A 11.5.5.1) for systems out of service for 30 days or more.
- Marshfield, Lawrence, and Ludlow do not have any records for the atmospheric corrosion inspections for piping under insulation. This is required at intervals of every 3 years with retainage for the life of the facility.
- A written procedure for corrosion control for Ludlow was not provided. This procedure is required for compliance with O&M Procedure requirements.
- Fire drills do not appear to be performed regularly at the Marshfield or Lawrence facilities.

ADDITIONAL OBSERVATIONS

- Up-to-date legible P&ID's were not available for the facilities. This prevented the confirmation that all components to be maintained were included in the records, such as relief valves, without a lengthy facility walkdown. More importantly, P&ID documentation is an important and necessary support document to meet the operations, maintenance and training requirements of 49CFR193 and NFPA 59A (by reference).
  - NFPA 59A, 2001 edition, specifically requires drawings to be maintained at the facility. The intent of this requirement are up-to-date drawings that support the requirements listed above which are a site plan, process flow diagram, P&ID's, electrical area classification, hazard detection/fire protection plan, and any other drawings necessary for operations, troubleshooting, maintenance, and training.
  - NFPA 59A, 2019 edition, includes additional language that confirms the intent for the drawings to be up-to-date. Although the 2019 edition is not incorporated by reference, it is expected to be soon, and the only changes made between 2001 and 2019 are related to clarifying the original intent.

Supporting Code Excerpts:

NFPA 59A, 2001 edition

11.2 Basic Requirements. Each operating company shall meet the following requirements:
(1) Have documented procedures covering operation, maintenance, and training
(2) Maintain drawings, charts, and records of plant equipment
(3) Revise the plans and procedures as experience dictates and as changes in operating conditions or plant equipment require
(4) Establish a documented emergency plan
(5) Establish liaison with appropriate local authorities such as police, fire department, or municipal works and inform them of the emergency plans and their role in emergency situations
(6) Analyze and document all safety-related conditions for the purpose of determining their causes and preventing the possibility of recurrence

NFPA 59A, 2019 edition

18.2.2 The operating company shall meet all of the following procedures:
(1) Document procedures and plans covering operation, maintenance, training, and security
(2) Maintain up-to-date drawings, charts, and records of LNG facility equipment
(3) Revise plans and procedures when operating conditions or LNG facility equipment are revised or as a result of lessons learned from an incident investigation
(4) Ensure cooldown of components in accordance with 18.3.5
(5) Establish a documented emergency plan
(6) Establish liaisons with local authorities such as police, fire department, or municipal works to coordinate the emergency plans and their roles in emergency situations
(7) Analyze and document all safety-related incidents to determine their cause and prevent the possibility of recurrence

RECOMMENDATIONS

The following recommendations are offered for Eversource consideration to improve plant documentation and record keeping requirements.

- Update the Process Flow and Piping & Instrument Diagrams for all facilities to current conditions to meet the intent of NFPA 59A.
- Confirm the site plan, electrical area classification, and hazard detection/fire protection plan drawings are representative of current conditions.
- Develop a plan to improve the required corrosion protection record keeping so the LNG facility has access to the records that are maintained by the corrosion department.

- Develop and maintain a plant employee list at the facility, including hire and termination date, to allow confirmation of initial and every two-year training for the duration of employment, plus two years.
- Improve plant access or ease of obtaining records for employee OQ training records for employees performing corrosion related tasks at the LNG facility.
- Identify in the plant maintenance manual or procedures how to document/ record the following:
    - When components are taken out of service when their respective safety devices are taken out of service for maintenance.
    - Confirmation that a minimum amount of fire control equipment is taken out of service at any one time and returned to service in a reasonable period of time.
    - Qualified company or contracted personnel perform each maintenance task.
- Identify and execute plan to conduct an annual generator capacity test under full plant load or alternate load test to meet requirements of 49CFR193.2613 and NFPA 59A 11.5.1.4, 11.5.1.5.
- Update scheduled maintenance tasks for the following to ensure compliance with codes and the plant maintenance manual:
    - Fire protection control system components, including manual pull stations, fire panel, and combustible gas detectors, tested at intervals not to exceed 6 months.
    - Process instrumentation
    - Atmospheric corrosion inspections for above grade un-insulated and insulated piping.
    - Tank foundation surveys
- Develop or identify plan for where to save/upload test results for contractor performed maintenance tasks to improve record keeping and plant access or ease of obtaining records such as relief valve testing reports.
- Perform and document required fire drills at all facilities.

Thank you for the opportunity to support Eversource on this effort. Please feel free to contact us with any questions.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.

Eric Bettencourt
Project Engineer

Heather James
Project Director

EDB/HNJ: edb

Encl. Marshfield and Easton Records Audits, Revision E, dated 1/19/21
Ludlow and Lawrence Records Audits Revision B, dated 1/19/21

cc: Larry Guy, Mark Thomas, Brendan Duffy, Jessica Crosby

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2603(c)(d) (NFPA 59A 11.5.7.1, 11.5.1.6, 11.5.1.7)	Each component taken out of service is identified in the records, including the date taken out of, or placed into service. If a safety device is taken out of service for maintenance, the component being served by the device is taken out of service unless the same safety function is provided by an alternate means.	5 years	☐ ☐	☒ ☒	☐ ☐	Procedures: • Procedure 016: General Maintenance Requirements.doc Gaps • Plant personnel indicate they lockout/tagout and isolate equipment prior to servicing safety devices, however records are not available to support.
193.2609 (NFPA 59A 11.5.1.3)	Each support system or foundation of each component is inspected for any detrimental change that could impair support at least annually.	5 years	☒	☐	☐	Procedures: • Procedure 020: Procedure for the Inspection of Support Systems.doc RTs: • MNTHLY INSP-PIPE SUPPORTS • ANNUAL INSP-PIPE SUPPORT • MNTHLY-STORAGE TANK-FOUNDATION Gaps: • None found.
193.2611(a)	Maintenance activities on fire control equipment is scheduled so that a minimum of equipment is taken out of service at any one time and is returned to service in a reasonable period of time.	5 years	☐	☒	☐	Procedures: • Procedure 026: Fire Protection System.doc Gaps • Records are not available to support.
(NFPA 59A 11.5.1.11)	The insulation for impounding surfaces is inspected annually to ensure that it is suitable for the intended service.	5 years	☐	☐	☒	

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2613 (NFPA 59A 11.5.1.4)	Auxiliary power source tested monthly to check its operational capability	5 years	☒	☐	☐	Procedures: • Procedure 021: Auxiliary Power Source.doc RTs: • MNTHLY INSP-EMERGENCY GEN Gaps: • None found.
193.2613 (NFPA 59A 11.5.1.4 11.5.1.5)	Auxiliary power source 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.	5 years	☐ ☐	☒ ☒	☐ ☐	Procedures: • Procedure 021: Auxiliary Power Source.doc RTs: • None Gaps: • The generator capacity test is not performed with the full running load of the plant.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2617(a) (NFPA 59A 11.5.4)	Repair work on components is performed and tested in a manner which: (1) As far as practicable, complies with the applicable requirements of Subpart D (construction) of this part; and (2) Assures the integrity and operational safety of the component being repaired. (3) Safety of personnel and property during a repair activity is maintained	5 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • Procedure 023: General Maintenance.doc • Repairs.doc RTs: The following provide examples of repair work from 2015 to support this requirement: • MAINTENANCE ON VAP #1 • REPAIR AC #1 • REPAIR AIR COMPRESSOR #2 • REPAIR GATE • REPAIR HCV-8 VALVE • REPAIR VAP 1 WITH WELDER • REPAIR VAP 3 WITH WELDER • REPAIR VAPORIZER #3 • REPAIR/REPLACE POSITIONER VLV • REPLACE BATTERIES • REPLACE BEARING E-4 • ADJUST/REPAIR GATE • CHANGE LIGHT BULB TOP OF TANK • MAINTENANCE ON VAP #1 Gaps: • None found.
193.2619(b) (NFPA 59A 11.5.5.1)	If a control system is out of service for 30 days or more, it is inspected and tested for operational capability before returning it to service.	5 years	☒	☐	☐	Procedures: • Procedure 024: Control Systems.doc RTs: • None. Gaps: • None. Systems have not been taken out of service within minimum records retention period.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(c) (NFPA 59A 11.5.5.1(d)	Control systems in service, but not normally in operation, are inspected and tested once each calendar year, not exceeding 15 months such as: • Relief valves • Automatic shutdown devices • Control systems for internal shutoff valves for bottom penetration tanks	5 years	 ☐ ☒ ☒	 ☒ ☐ ☐	 ☐ ☐ ☐	Procedures: • Procedure 024: Control Systems.doc RTs & Other Documentation: • Safety & Relief Valves – Annual Inspection: 47 RTs. Search for “SV” and “RV”. • MTHLY-ESD-EMERGENCY SHUTDOWN • Easton weekly PM sheets indicate monthly testing of Emergency Shutdown System, which actuates the internal tank withdrawal HCV, and the vaporizer outlet TCV Gaps: • Missing 2017: ANN INSP-AIR COMP SV-AC1A & ANN INSP-AIR COMP SV-AC2A • The plant P&ID’s are not complete and do not appear to represent current conditions. Without an updated set of plant P&IDs, it is difficult for third party auditors to independently verify that maintenance performed for relief valves is being tracked adequately and entirely by RTs.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(c)(1) (NFPA 59A 11.5.5.1(b))	Control systems used seasonally, such as for liquefaction or vaporization, are inspected and tested before use each season.	5 years	☒	☐	☐	Procedures: • Procedure 024: Control Systems.doc RTs: • ANN INSP-TEST RUN THE PLANT • MTHLY INSP-PUMP #1 • MTHLY INSP-PUMP #2 • MTHLY INSP-PUMP #3 • MTHLY INSP-PUMP #4 • QTRLY INSP-VAPORIZER #1 • QTRLY INSP-VAPORIZER #2 • QTRLY INSP-VAPORIZER #3 • ANNUAL INSP-VAPORIZER #1 • ANNUAL INSP-VAPORIZER #2 • ANNUAL INSP-VAPORIZER #3 • MTHLY INSP-PUMP #1 • MTHLY INSP-PUMP #2 • MTHLY INSP-PUMP #3 • MTHLY INSP-PUMP #4 • QTRLY INSP-GLYCOL PUMP #1 • QTRLY INSP-GLYCOL PUMP #2 • BIANNUAL INSP-GLYCOL PUMP #1 • BIANNUAL INSP-GLYCOL PUMP #2 Gaps: • None found.
193.2619(c)(2) (NFPA 59A 11.5.5.1(c))	Control systems that are intended for fire protection are inspected and tested at regular intervals not to exceed 6 months.	5 years	☐	☒	☐	Procedures: • Procedure 024: Control Systems.doc • Procedure 024: Gas Detection Systems.doc • Procedure 024: U V Detectors.doc

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• Procedure 024: Proprietary Signaling Systems.doc • Procedure 024: Local Protective Signaling Systems.doc • Procedure 024: Fire Protection Equipment & Systems.doc RTs: • INSP UV/IR • ANN-HAZARDOUS GAS DETECTOR • ANN INSP-FIRE SUP EQUIPMENT • Note: audible/visual fire indicators are tested monthly as part of the UV/IR system test/inspection. Gaps: • Missing UV/IR checks for 1/2015 and 2/2015 • Annual RT only for gas detectors. Code and Plant Procedure requires bi-annual. • Fire pull box is not tested. • Fire panel that calls local FD, and fire panel that provides local alarm on fire/hazard conditions are only tested annually. Code requires bi-annual.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(d)	Control systems that are normally in operation, such as required by a base load system, are inspected and tested once each calendar year but with intervals not exceeding 15 months.	5 years	☒	☐	☐	Procedures: • Procedure 024: Control Systems.doc RTs: • ANN INSP-LNG STORAGE TANK • ANN-LNG DP TRANSMITTER • ANN-LNG INLET PRESS TRANSMITTE • ANN-LNG TEMP TRANSMITTER • MTHLY INSP-CHROMATOGRAPH • ANN-PRESSURE GAUGE CALIBRATION • ANNUAL INSP-S/TANK VB-T1G • ANNUAL INSP-S/TANK VB-T1H Gaps: • None found.
193.2619(e)	Relief valves are inspected and tested for verification of the valve seat lifting pressure and reseating.	5 years	☐	☒	☐	Procedures: • Procedure 024: Easton LNG Plant Relief Valves RTs: • Safety & Relief Valves – Annual Inspection: 47 RTs. Search for “SV” and “RV”. Gaps: • Missing 2017: ANN INSP-AIR COMP SV-AC1A & ANN INSP-AIR COMP SV-AC2A
193.2605(b)	Inspection/testing per operator’s maintenance manual for all other applicable components not listed in the line items above such as: • Instrument Air Compressors • Air Dryers • Boil-off Compressors • ESD system	5 years	 ☒ ☒ ☒ ☒	 ☐ ☐ ☐ ☐	 ☐ ☐ ☐ ☐	Procedures: • AC 1 and 2 Instrument Air Compressors.doc • AD 1 and 2 Air Dryers.doc • C-1 Boil-off Compressor.doc

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
	• Glycol Pumps • Orifice Plate • Odorant System • LNG Pumps • Sump Pump & Scale Pump • Pipe Supports & Foundations • Plant Valves • Security Gate Control Mechanism • Vaporizers • Fire protection water systems • Hazardous Gas Detection • Fire extinguishers • Fire Skids		☒ ☐ ☒ ☒ ☒ ☒ ☐ ☒ ☒ ☒ ☐ ☒ ☒	☐ ☒ ☐ ☐ ☐ ☐ ☒ ☐ ☐ ☐ ☒ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	• Emergency Shut-down System.doc • Fire Extinguisher - Cartridge Operated Unit.doc • Fire Extinguisher – Internally Pressurized Unit.doc • Fire Extinguisher.doc • Fire Fighting Equipment.doc • Fire Skids.doc • Glycol Coolant Pump P-5 and E-4 Heat Exchanger.doc • Hazardous Gas Detection System.doc • Odorant System.doc • Orifice Plate.doc • P1 P2 P# LNG Pumps.doc • Pipe Supports and Foundations.doc • Plant Valves.doc • Security Gate Control Mechanism.doc • Vaporizers H1 and H3 and H2.doc • Sump Pump (Dike Area) and Scale Pump.doc • Vaporizerh-2.doc RTs: • QTRLY INSP-VAPORIZER #1 • QTRLY INSP-VAPORIZER #2 • QTRLY INSP-VAPORIZER #3 • ANNUAL INSP-VAPORIZER #1 • ANNUAL INSP-VAPORIZER #2

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• ANNUAL INSP-VAPORIZER #3 • MTHLY INSP-BOILOFF COMPRESS • QTRLY INSP-GLYCOL PUMP #1 • QTRLY INSP-GLYCOL PUMP #2 • ANNUAL INSP-AIR COMP #1 • ANNUAL INSP-AIR COMP #2 • ANNUAL INSP-AIR DRYER #1 • ANNUAL INSP-AIR DRYER #2 • QTRLY INSP-AIR DRYER #1 • QTRLY INSP-AIR DRYER #2 • ANNUAL INSP-DIKE&SUMP PUMP • BIANNUAL INSP-DIKE&SUMP PUMP • QTRLY INSP-DIKE&SUMP PUMP • MTHLY INSP-DIKE&SUMP PUMP • 6M-BOIL OFF COMPRESSOR • ANNUAL-BOILOFF COMPRESSOR • QTRLY INSP-BOILOFF COPRESS • MONTHLY INSP-ODORIZER • MTHLY INSP-ODORIZER • QTRLY INSP-AIR COMPRESS #1 • QTRLY INSP-AIR COMPRESS #2 • MTHLY INSP-AIR COMPRESS#1

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• MTHLY INSP-AIR COMPRESS#2 • MTHLY INSP-AIR DRYER #1 • MTHLY INSP-AIR DRYER #2 • MNTHLY INSP-PIPE SUPPORTS • ANNUAL INSP-PIPE SUPPORT • ANNUAL INSP-GATE OPERATOR • MTHLY INSP-FENCE/GATE • ANNUAL INSP-HEAT EXCHANGER • ANNUAL INSP-SCALE PUMP • BIANNUAL INSP-SCALE PUMP • QTRLY INSP-SCALE PUMP • MTHLY INSP-SCALE PUMP • 21 Monthly Fire Extinguishers (#1-21) • ANN INSP-FIRE SUP EQUIPMENT • ANNUAL INSP-FIRE HOSES • ANNUAL DRAIN FIRE HYDRANTS • MNTHLY-FIRE HYDRANTS-LNG • MTHLY-FIRE STORGE LOCKERS-LNG • ANN-HAZARDOUS GAS DETECTOR • MTHLY-ESD-EMERGENCY SHUTDOWN

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• GREASE/OPERATE PLANT VALVES • MTHLY PLANT LEAK TEST • Recommended to remove UV/IR inspection and monthly hazardous gas detection inspection (no RT found) from this section, as they are already present in 193.2619(c)(2) Gaps: • Annual RT only for gas detectors. Code and Plant Procedure requires bi-annual. • No outlet valve RT for 2016, 2017, 2018, 2019. • No orifice plate RT.
193.2621(a) (NFPA 59A 8.7.5)	Hoses used in LNG or flammable refrigerant transfer systems are: Tested once each calendar year, but with intervals not exceeding 15 months, to the maximum pump pressure or relief valve setting;	5 years	☒	☐	☐	Procedures: • Procedure 045 #193.2621.doc RTs: • MTHLY INSP-LNG HOSES • ANNUAL INSP-LNG HOSES Gaps: • None found.
193.2621(b) (NFPA 59A 8.7.5)	Hoses visually inspected for damage or defects before each use.	5 years	☒	☐	☐	Procedures: • Procedure 045 #193.2621.doc RTs: • Refer to LNG transfer procedures for this record. Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2623(a) (NFPA 59A 11.5.5.1(f)(g))	Each LNG storage tank is inspected or tested to verify that each of the following conditions does not impair the structural integrity or safety of the tank: (a) Foundation and tank movement during normal operation and after a major meteorological or geophysical disturbance.	5 years	☐	☒	☐	Procedures: • Procedure 025: Storage Tanks RTs: • MNTHLY-STORAGE TANK/FOUNDATION • ANN INSP-LNG STORAGE TANK Gaps: • Tank survey was not performed in 2016.
193.2623(b) (NFPA 59A 11.5.5.1(f))	Inner tank leakage	5 years	☒	☐	☐	Procedures: • Procedure 025: Storage Tanks RTs: • ANN INSP-LNG STORAGE TANK Gaps: • None found.
193.2623(c) (NFPA 59A 11.5.5.1(f))	Effectiveness/soundness of insulation	5 years	☒	☐	☐	Procedures: • Procedure 025: Storage Tanks RTs: • ANN INSP-LNG STORAGE TANK Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2623(d) (NFPA 59A 11.5.5.1(f))	Frost heave (i.e. tank foundation heating system operation)	5 years	☒	☐	☐	Procedures: • Procedure 025: Storage Tanks • GS ELNG.OP04 LNG Tank Normal Operation & Control RTs & Other Documentation: • MTHLY-STORAGE TANK/FOUNDATION • ANN INSP-LNG STORAGE TANK • Daily Shift Acceptance records indicate temperatures and ampere measurements are taken at the beginning of each shift Gaps: • None found
193.2635(a) (NFPA 59A 11.5.6.4(a))	Buried or submerged components under cathodic protection are tested at least once each calendar year, not exceeding 15 months, to determine cathodic protection adequacy	Life of Facility	☐	☒	☐	Procedures: • Procedure 008: #1932635 Corrosion Control.doc • Procedure 008: General Procedures.doc Documentation: • Easton LNG CP.pdf Gaps: • Records not provided for life of facility: see Section 193.2635(b).

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2635(b) (NFPA 59A 11.5.6.4(b))	Rectifier or other impressed current power source is inspected at least 6 times each calendar year, but not exceeding 2.5 months, to ensure that it is operating properly.	Life of Facility	☐	☒	☐	Procedures: • Procedure 008: #1932635 Corrosion Control.doc • Procedure 008: General Procedures.doc Documentation: • Easton LNG CP.pdf Gaps: • Rectifier readings were only provided for January 2014 to November 2019, but are required for life of the facility.
193.2635(c)	Each reverse current switch, each diode, and each interference bond whose failure would jeopardize component protection is electrically checked for proper performance at least 6 times each calendar year, not exceeding 2.5 months.	Life of Facility	☐	☐	☒	
193.2635(c) (NFPA 59A 11.5.6.4(c))	Non-critical interference bonds are checked at least once each calendar year, not exceeding 15 months.	Life of Facility	☐	☐	☒	

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2635(d) (NFPA 59A 11.5.6.4(d))	Each component that is protected from atmospheric corrosion is inspected at intervals not exceeding 3 years.	Life of Facility	☐	☒	☐	Procedures: • Procedure 008: #1932635 Corrosion Control.doc • Procedure 008: General Procedures.doc RTs & Other Documentation: • Every three years a random piece of insulation is removed and underlying piping is inspected for corrosion. • For exposed, above-ground piping, daily Exception Shift Report indicates personnel monitor for corrosion at the start of every shift. Gaps: • Records of insulated piping inspection in Easton began in 2014.
193.2635(e) (NFPA 59A 11.5.6.4(e))	Internal corrosion control monitoring devices are checked at least two times each calendar year, but not exceeding 7.5 months.	Life of Facility	☐	☐	☒	
193.2637 (NFPA 59A 11.5.6.5)	Prompt corrective or remedial action was taken whenever an operator learned by inspection or otherwise that atmospheric, external, or internal corrosion is not controlled as required	Life of Facility	☒	☐	☐	Procedures: • Procedure 009: Remedial Measures.doc RTs: • REPAIR VAP 1 WITH WELDER • REPAIR VAP 3 WITH WELDER Gaps: • None found, procedures and sampling of repair tasks found to support this requirement.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2639(b)	Records or maps to show the location of cathodically protected components, neighboring structures bonded to the cathodic protection system, and corrosion protection equipment.	Life of Facility	☒	☐	☐	Procedures: • Procedure 028: D O T Federal Register Regulation 193.2639.doc Documentation: • Easton LNG CP.pdf Gaps: • None found.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2707(a)(b) (NFPA 59A 11.6.6, 11.6.7)	O&M of components was conducted by personnel who met the qualifications and training requirements, including proficiency test, or who were supervised by personnel who met the qualifications and training requirements.	Employment Duration plus 2 years	☒	☐	☐	Procedures: • Procedure 032: Operations and Maintenance #193.2707.doc Statement: • Per CMA Only trained personnel are assigned tasks through the WMS system and for a given task, the individual marks it as complete electronically. Gaps: • None found, procedures and CMA statement above supports this requirement.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2707(c)	Corrosion control procedures, including those for the design, installation, operation, and maintenance of cathodic protection systems, were carried out by, or under the direction of, a person qualified by experience and training in corrosion control technology.	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Procedure 032: Operations and Maintenance #193.2707.doc Statement: • Per CMA, Only OQ trained personnel are assigned tasks through the WMS system and for a given task, the individual marks it as complete electronically. Gaps: • OQ Training records not retained prior to 2010.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2713(a) (NFPA 59A 11.6.1)	Initial O&M training for operations, maintenance, and supervisory personnel to include: ▪ Characteristics & hazards of LNG and other flammable fluids used at the facility ▪ Potential hazards involved in O&M activities ▪ To carry out the O&M procedures related to assigned duties ▪ Emergency procedures related to assigned duties ▪ First-aid ▪ Facility operations, controls, & functions for operating and supervisory personnel ▪ LNG transfer procedures for operating and supervisory personnel	Employment Duration plus 2 years	☒ ☒ ☒ ☒ ☒ ☒ ☒	☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐	Procedures: • Procedure 035: Plant Operation and Training.doc Training Documents: • Tests #1 & #2 (Characteristics & hazards of LNG and other flammable fluids used at the facility) • Test #2 (Facility operations, controls, & functions for operating and supervisory personnel) • Test #3 (Emergency procedures related to assigned duties) • Test #5 (LNG transfer procedures for operating and supervisory personnel) • Test #7 (Potential hazards involved in O&M activities & To carry out the O&M procedures related to assigned duties) Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records for two operators are not available. Section 193.2713(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2713(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up operations & maintenance training every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Procedure 035: Plant Operation and Training.doc Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Gaps: • Training records are not available prior to 1990 for two employees. In all other cases, training records are present and follow-up training occurs as required every two years (or sooner) for all employees.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2715(a) (NFPA 59A 11.6.1)	Initial security training for personnel responsible for security duties to include: ▪ Recognize breaches of security ▪ Carry out security procedures related to assigned function ▪ Recognize conditions where security assistance is needed ▪ Be familiar with basic plant operations and emergency procedures as needed for assigned duties	Employment Duration plus 2 years	☒ ☒ ☒ ☒	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	Procedures: • Procedure 036: Security Training Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Training Documents: • Test #6 (Recognize breaches of security, Carry out security procedures related to assigned function & Recognize conditions where security assistance is needed) • Test #3 (Be familiar with basic plant operations and emergency procedures as needed for assigned duties) Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records for two operators are not available. Section 193.2715(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2715(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up security training every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Procedure 036: Security Training Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Gaps: • Training records are not available prior to 1990 for two employees. In all other cases, training records are present and follow-up training occurs as required every two years (or sooner) for all employees.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(a) (NFPA 59A 11.6.1)	Initial fire protection training, including fire drills, for operations, maintenance, and supervisory personnel to include: ▪ Know the potential causes and areas of fire; ▪ Know the types, sizes, and predictable consequences of fire; and ▪ Know and be able to perform their assigned fire control duties and proper use of equipment	Employment Duration plus 2 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • Procedure 037: Fire Prevention and Control #193.2717.doc Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. • Test #3 (Know the potential causes and areas of fire, Know the types, sizes, and predictable consequences of fire, & Know and be able to perform their assigned fire control duties and proper use of equipment) Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records for two operators are not available. Section 193.2717(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up fire protection training, including fire drills, every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Procedure 037: Fire Prevention and Control #193.2717.doc Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Gaps: • Training records are not available prior to 1990 for two employees. In all other cases, training records are present and follow-up training occurs as required every two years (or sooner) for all employees.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(c)	Plant fire drills provide personnel hands-on experience in carrying out their duties under the fire emergency procedures	Employment Duration plus 2 years	☒	☐	☐	Procedures: • Procedure 037: Fire Prevention and Control #193.2717.doc Documentation: • Fire drills are performed at least monthly, with indication of the area in which the simulated fire is located. Easton Fire Drill training log provides this record, and Weekly PM sheets provide this record as well. Gaps: • Marked satisfactory to signify CMA meets fire drill requirements. However as per 193.2717(b) above, initial training records for two operators are not available. Section 193.2713(b) is marked unsatisfactory to signify that the record requirement is not fully met.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
193.2603(c)(d) (NFPA 59A 11.5.7.1, 11.5.1.6, 11.5.1.7)	Each component taken out of service is identified in the records, including the date taken out of, or placed into service. If a safety device is taken out of service for maintenance, the component being served by the device is taken out of service unless the same safety function is provided by an alternate means.	5 years	☒ ☒	☐ ☐	☐ ☐	Procedures: • None found. Documents: • Spot check indicates plant personnel record in the logbook whenever equipment is locked out/tagged out to service relief valves.
193.2609 (NFPA 59A 11.5.1.3)	Each support system or foundation of each component is inspected for any detrimental change that could impair support at least annually.	5 years	☒	☐	☐	Procedures: • LNG Operations Procedures Manual.pdf • Lawrence LNG STORAGE TANK INSPECTION.xlsx RTs: • QUARTERLY INSP-LNG TANK A or QRTLY INSP-LNG TANK A (QUARTERLY) • QUARTERLY INSP-LNG TANK B (QUARTERLY) • QUARTERLY INSP-LNG TANK C (QUARTERLY) • QUARTERLY INSP-LNG TANK D (QUARTERLY) • QUARTERLY INSP-LNG TANK E (QUARTERLY) Documents: • Spot check indicates foundation inspections are part of the daily tank inspection shown in the Daily LNG Log book.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
193.2611(a)	Maintenance activities on fire control equipment is scheduled so that a minimum of equipment is taken out of service at any one time and is returned to service in a reasonable period of time.	5 years	☒	☐	☐	Procedures: • lng operations procedures manual.pdf Documentation: • Plant personnel indicate fire control equipment vendor does not remove equipment from plant during maintenance/servicing.
(NFPA 59A 11.5.1.11)	The insulation for impounding surfaces is inspected annually to ensure that it is suitable for the intended service.	5 years	☐	☐	☒	
193.2613 (NFPA 59A 11.5.1.4)	Auxiliary power source tested monthly to check its operational capability	5 years	☒	☐	☐	Procedures: • lng operations procedures manual.pdf RTs: • GENERATOR MAINTENANCE-MAJOR • GENERATOR MAINTENANCE-MINOR • GENERATOR MAINTENANCE-MONTHLY (MONTHLY) Gaps: • None found.
193.2613 (NFPA 59A 11.5.1.4 11.5.1.5)	Auxiliary power source 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.	5 years	☒ ☒	☐ ☐	☐ ☐	Procedures: • lng operations procedures manual.pdf RTs: • GENERATOR MAINTENANCE-LOAD Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
193.2617(a) (NFPA 59A 11.5.4)	Repair work on components is performed and tested in a manner which: (1) As far as practicable, complies with the applicable requirements of Subpart D (construction) of this part; and (2) Assures the integrity and operational safety of the component being repaired. (3) Safety of personal and property during a repair activity is maintained	5 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • lng operations procedures manual.pdf RTs: The following provide examples of repair work from 2015 to support this requirement: • REPAIR DOOR AT PLANT • REPL MOTOR TO VAC PUMP Gaps: • None found.
193.2619(b) (NFPA 59A 11.5.5.1)	If a control system is out of service for 30 days or more, it is inspected and tested for operational capability before returning it to service.	5 years	☒	☐	☐	Procedures: • lng operations procedures manual.pdf Gaps: • None. Systems have not been taken out of service within minimum records retention period.
193.2619(c) (NFPA 59A 11.5.5.1(d)	Control systems in service, but not normally in operation, are inspected and tested once each calendar year, not exceeding 15 months such as: • Relief valves • Automatic shutdown devices • Control systems for internal shutoff valves for bottom penetration tanks	5 years	☐ ☒ ☒	☒ ☐ ☐	☐ ☐ ☒	Procedures: • lng operations procedures manual.pdf RTs: • Safety & Relief Valves – Annual Inspection: 48 RTs. Search for “Relief VLV”. (ANNUAL) • QRTLY MAIN POWER SHUTDOWN (QUARTERLY) • TEST LNG EMERGENCY SHUTDOWN (MONTHLY) Gaps: • INSP-2"RELIEF VLV SN\SPARE is missing after 2017 and does not appear to have been put into service or assigned a SN

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						• INSP-1"RELIEF VLV SN\TG69357 is missing in 2018 with no replacement RT • INSP-1"RELIEF VLV SN\TH19154 is missing in 2018 with no replacement RT • INSP-1"RELIEF VLV SN\TH19155 is missing in 2018 with no replacement RT • INSP-1"RELIEF VLV SN\TH19149 is missing in 2018 with no replacement RT • INSP-1/2"RELIEF VLV SN\TH04605 is missing in 2018 with no replacement RT • INSP-1/2"RELIEF VLV SN\TH04607 is missing in 2018 with no replacement RT • 8 relief valve RTs are believed to be retired as of 2019, however 11 new relief valve RTs were added in 2019. Documentation of additional 3 relief valve retirements and/or additions in WMS is inadequate. • The plant P&ID's are not complete and do not appear to represent current conditions. Without an updated set of plant P&IDs, it is difficult for third party auditors to

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						independently verify that maintenance performed for relief valves is being tracked adequately and entirely by RTs.
193.2619(c)(1) (NFPA 59A 11.5.5.1(b))	Control systems used seasonally, such as for liquefaction or vaporization, are inspected and tested before use each season.	5 years	☒	☒	☐	Procedures: • lng operations procedures manual.pdf RTs: • INSP-BLOWER A-RUN (ANNUAL) • INSP-BLOW B-RUN (ANNUAL) • INSP FUEL GAS REGULATOR A-RUN (ANNUAL) • INSP FUEL GAS REGULATOR B-RUN (ANNUAL) • ANNUAL INSPECTION VAPORIZER A (ANNUAL) ANNUAL INSPECTION VAPORIZER B (ANNUAL) • METRO SVC VAPORIZER INSPECTION (ANNUAL) • INSP-VAPORIZER A-RUN (ANNUAL) • INSP-VAPORIZER B-RUN (ANNUAL) • INSP-VAPOR OUT VALVE A-RUN (ANNUAL) • INSP-VAPOR OUT VALVE B-RUN (ANNUAL) • INSP-TEST RUN LNG PLANT (ANNUAL) • INSP-ALNOR PUMP TEMP A-RUN (ANNUAL) • INSP-ALNOR PUMP TEMP B-RUN (ANNUAL) • INSP-ALNOR OUTLET TEMP A-RUN (ANNUAL)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						• INSP-ALNOR OUTLET TEMP B-RUN (ANNUAL) • INSP-ALNOR STACK TEMP A-RUN (ANNUAL) • INSP-ALNOR STACK TEMP B-RUN (ANNUAL) • INSPECT LIQ RETURN VLV A-PUMP (ANNUAL) • INSPECT LIQ RETURN VLV B-PUMP (ANNUAL) • INSPECT WIZARD CTRL A-PUMP (ANNUAL) • INSPECT WIZARD CTRL B-PUMP (ANNUAL) • INSP-ELECTRL CNTRL SYS A-RUN (ANNUAL) • INSP-ELECTRL CNTRL SYS B-RUN (ANNUAL) • INSP-FISHER TEMP CNTRL A-RUN (ANNUAL) • INSP-FISHER TEMP CNTRL B-RUN (ANNUAL) • INSP-INST AIR FILTER A-RUN (ANNUAL) • INSP-INST AIR FILTER B-RUN (ANNUAL) • INSP-LIQUID DP CELL A-RUN (ANNUAL) • INSP LIQUID DP CELL B-RUN (ANNUAL) • INSP-LIQUID IN VALVE A-RUN (ANNUAL) • INSP-LIQUID IN VALVE B-RUN (ANNUAL) • INSP-MAXON VALVE A-RUN (ANNUAL) • INSP MAXON VALVE B-RUN (ANNUAL) • INSP-POSITIONER A-RUN (ANNUAL) • INSP-POSITIONER B-RUN (ANNUAL)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						• INSP-MICRO RATIO VLV A-RUN (ANNUAL) • INSP-MICRO RATIO VLV B-RUN (ANNUAL) Gaps: • INSP-BLOWER A-RUN & INSP-BLOWER B-RUN missing in 2018 • INSP-FISHER TEMP CNTRL A-RUN & INSP-FISHER TEMP CNTRL B-RUN are missing in 2017 • INSP-LIQUID DP CELL A-RUN is missing in 2018 • INSP-LIQUID IN VALVE A-RUN & INSP-LIQUID IN VALVE B-RUN are missing in 2016, 2017, 2018, 2019 • INSP-MAXON VALVE A-RUN is missing in 2017 • Following RTs missing in 2016: ○ INSP-ALNOR PUMP TEMP A-RUN ○ INSP-ALNOR PUMP TEMP B-RUN ○ INSP-ALNOR OUTLET TEMP A-RUN ○ INSP-ALNOR OUTLET TEMP B-RUN ○ INSP-ALNOR STACK TEMP A-RUN

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						○ INSP-ALNOR STACK TEMP B-RUN
193.2619(c)(2) (NFPA 59A 11.5.5.1(c))	Control systems that are intended for fire protection are inspected and tested at regular intervals not to exceed 6 months.	5 years	☒	☐	☐	Procedures: • lng operations procedures manual.pdf RTs: • FIRE INSP-HALON SYSTEM (ANNUAL) • INSP-FIRE EYE A-RUN (ANNUAL) • INSP-FIRE EYE B-RUN (ANNUAL) • MONTHLY INSP-UV SYSTEM (MONTHLY) • MONTHLY INSP-GAS ALARM (MONTHLY) Gaps: • None found.
193.2619(d)	Control systems that are normally in operation, such as required by a base load system, are inspected and tested once each calendar year but with intervals not exceeding 15 months.	5 years	☐	☒	☐	Procedures: • lng operations procedures manual.pdf RTs: • INSPECT BURST DISC A-TANK (ANNUAL) • INSPECT BURST DISC B-TANK (ANNUAL) • INSPECT BURST DISC C-TANK (ANNUAL) • INSPECT BURST DISC D-TANK (ANNUAL) • INSPECT BURST DISC E-TANK (ANNUAL) • INSPECTION LNG TANKS (ANNUAL) • CALIBRATE INCHES GAUGE A-TANK (ANNUAL) • CALIBRATE INCHES GAUGE B-TANK (ANNUAL)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						• CALIBRATE INCHES GAUGE C-TANK (ANNUAL) • CALIBRATE INCHES GAUGE D-TANK (ANNUAL) • CALIBRATE INCHES GAUGE E-TANK (ANNUAL) • CALIBRATE PRESS GAUGE A-TANK (ANNUAL) • CALIBRATE PRESS GAUGE B-TANK (ANNUAL) • CALIBRATE PRESS GAUGE C-TANK (ANNUAL) • CALIBRATE PRESS GAUGE D-TANK (ANNUAL) • CALIBRATE PRESS GUAGE E-TANK (ANNUAL) • INSPECT KINNEY VAC PUMP KDH65 (NI-ANNUAL) • INSPECT KINNEY VAC PUMP KDH130 (BI-ANNUAL) • INSP-LNG PRESSURE TRANSMITTER (ANNUAL) • MICROSWITCH A-TANK RELIEF (BI-ANNUAL) • MICROSWITCH A-TANK BURST DISC (BI-ANNUAL) • MICROSWITCH B-TANK RELIEF (BI-ANNUAL) • MICROSWITCH B-TANK BURST DISC (BI-ANNUAL) • MICROSWITCH C-TANK RELIEF (BI-ANNUAL)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						• MICROSWITCH C-TANK BURST DISC (BI-ANNUAL) • MICROSWITCH D-TANK RELIEF (BI-ANNUAL) • MICROSWITCH D-TANK BURST DISC (BI-ANNUAL) • MICROSWITCH E-TANK RELIEF (BI-ANNUAL) • MICROSWITCH E-TANK BURST DISC (BI-ANNUAL) • INSP-RTD PROBE-LNG RUN (BI-ANNUAL) • INSP-LNG DP TRANSMITTER (BI-ANNUAL) • INSP-LNG TEMP TRANSMITTER (ANNUAL) • QUARTERLY INSP-LNG TANK A or QRTLY INSP-LNG TANK A (QUARTERLY) • QUARTERLY INSP-LNG TANK B (QUARTERLY) • QUARTERLY INSP-LNG TANK C (QUARTERLY) • QUARTERLY INSP-LNG TANK D (QUARTERLY) • QUARTERLY INSP-LNG TANK E (QUARTERLY) Gaps: • INSP-LNG TEMP TRANSMITTER is missing in 2016

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
193.2619(e)	Relief valves are inspected and tested for verification of the valve seat lifting pressure and reseating.	5 years	☐	☒	☐	Procedure: • LAWRENCE LNG TANK RELIEF VALVE PROC.xlsx • lng operations procedures manual.pdf RTs: • Safety & Relief Valves – Annual Inspection: 48 RTs. Search for "Relief VLV". Gaps: • Reference section 193.2619(c) for list of missing relief valves • Invoices/Reports from third party testing company were not provided to verify valve seat lifting pressure and reseating.
193.2605(b)	Inspection/testing per operator's maintenance manual for all other applicable components not listed in the line items above such as: • ESD system • Hazardous gas detectors • Fire protection water systems • Fire extinguishers • Plant Gates • Odorizer • Orifice Plate • LNG Pumps • Sump Pump • Pipe Supports & Foundations • Plant Valves • Fire Skids • Intrusion Detection System • SCBAs • Graphic Display Panel • Chart Recorder • Control Room Heater • Grounding system	5 years	 ☐ ☒ ☒ ☐ ☐ ☒ ☐ ☒ ☒ ☒ ☐ ☐ ☒ ☐ ☐ ☒ ☐ ☒	 ☒ ☐ ☐ ☒ ☒ ☐ ☒ ☐ ☐ ☐ ☒ ☒ ☐ ☒ ☐ ☒ ☐	 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Procedures: • lng operations procedures manual.pdf RTs: • EMERGENCY SHUTDOWN A-TANK (BI-ANNUAL) • EMERGENCY SHUTDOWN B-TANK (BI-ANNUAL) • EMERGENCY SHUTDOWN C-TANK (BI-ANNUAL) • EMERGENCY SHUTDOWN D-TANK (BI-ANNUAL) • EMERGENCY SHUTDOWN E-TANK (BI-ANNUAL) • INSP LNG ODORIZER DP CELL (ANNUAL)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
	• Thermocouple • Chromatograph • Boiloff Regulator • LNG Flow Chart		☐ ☒ ☒ ☒ ☒	☒ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	• INSP-CHART RECORDER (ANNUAL) • INSPECT BOILOFF REGULATOR (ANNUAL) • INSPECT COG BELT P500A (ANNUAL) • INSPECT COG BELT P501A (ANNUAL) • INSPECT COG BELT P500B (ANNUAL) • INSPECT COG BELT P501B (ANNUAL) • INSPECT CRYOGENIC PUMP P501A (ANNUAL) • INSPECT CRYOGENIC PUMP P500A (ANNUAL) • INSPECT CRYOGENIC PUMP 500B (ANNUAL) • INSPECT CRYOGENIC PUMP 500B (ANNUAL) • INSPECT PUMP MOTOR 500A (ANNUAL) • INSPECT PUMP MOTOR 501A (ANNUAL) • INSPECT MOTOR P500B (ANNUAL) • INSPECT MOTOR P501B (ANNUAL) • INSP-GRAPHIC DISPLAY PANEL (MONTHLY) • INSP-HEATER-LNG CONTROL ROOM (ANNUAL) • INSP-LNG-GROUNDING SYSTEM (QUARTERLY) • MONTHLY INSP-LNG FLOW CHART (MONTHLY) • MONTHLY INSP-GATE LNG ENTRANCE (MONTHLY)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						• MONTHLY INSP-GATE LNG EXIT (MONTHLY) • MONTHLY INSP-ODORIZER (MONTHLY) • MONTHLY-INSP-ODORIZER-LNG PLNT (MONTHLY) • ANNUAL INSP-SCBA (ANNUAL) • MONTHLY INSP-SCBA or MOTHLY INSP-SCBA (MONTHLY) • MTHLY INSP-CHROMATOGRAPH (MONTHLY) • QRTLY MAIN POWER SHUTDOWN (QUARTERLY) • TEST LNG EMERGENCY SHUTDOWN (MONTHLY) • QUARTERLY LNG INTRUSION SYSTEM (QUARTERLY) • THERMOCOUPLE GAUGE INSP (QUARTERLY) • BIANNUAL FIRE EXT-LNG PLANT (BIANNUAL) • MTHLY INSP FIRE EXT-LNG PLANT (MONTHLY) Documentation: • As the plant is manually operated, valve stroking was reported to not be performed on a scheduled basis for maintenance purposes as valves are stroked as part of the annual test run and other test runs. However, no written records were provided to support the successful

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						valve stroking of the valves. • Daily logs indicate foundation inspections are performed daily. Gaps: • 1 quarter of INSP-LNG GROUNDING SYSTEM (QUARTERLY) missing in 2015 • MONTHLY INSP-GATE LNG EXIT & MONTHLY INSP-GATE LNG ENTRANCE in 2015 are missing for 01/15, 02/15, 03/15. • BIANNUAL FIRE EXT-LNG PLANT is missing in 2015. • MTHLY INSP FIRE EXT-LNG PLANT is missing in 2015 & 2016 • INSP-CHART RECORDER is missing in 2019 • MONTHLY INSP-SCBA is missing in December 2019 • ANNUAL INSP-SCBA is missing in 2017 • MTHLY INSP FIRE EXT-LNG PLANT is missing 4 months in 2016 • No orifice plate RTs • The following RTs are missing one bi-annual test in 2017: ○ EMERGENCY SHUTDOWN A-TANK ○ EMERGENCY SHUTDOWN B-TANK

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
						○ EMERGENCY SHUTDOWN C-TANK ○ EMERGENCY SHUTDOWN D-TANK ○ EMERGENCY SHUTDOWN E-TANK ○ EMERGENCY SHUTDOWN B-TANK is also missing one bi-annual test in 2018
193.2621(a) (NFPA 59A 8.7.5)	Hoses used in LNG or flammable refrigerant transfer systems are: Tested once each calendar year, but with intervals not exceeding 15 months, to the maximum pump pressure or relief valve setting;	5 years	☒	☐	☐	Procedures: • Lawrence TRANSFER HOSE TEST Procedure.xlsx • lng operations procedures manual.pdf RTs: • INSP-LNG UNLOADING HOSES (ANNUAL) Gaps: • None found.
193.2621(b) (NFPA 59A 8.7.5)	Hoses visually inspected for damage or defects before each use.	5 years	☒	☐	☐	Procedures: • lng operations procedures manual.pdf RTs: • Refer to LNG transfer procedures for this record. Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
193.2623(a) (NFPA 59A 11.5.5.1(f)(g))	Each LNG storage tank is inspected or tested to verify that each of the following conditions does not impair the structural integrity or safety of the tank: (a) Foundation and tank movement during normal operation and after a major meteorological or geophysical disturbance.	5 years	☐	☒	☐	Procedures: • lng operations procedures manual.pdf • Lawrence LNG STORAGE TANK INSPECTION.xlsx • 19-312 Tank Pad Plan RTs: • No major geological disturbances reported during audit period. Gaps: • No surveys provided for 2015, 2016, 2017, 2018
193.2623(b) (NFPA 59A 11.5.5.1(f))	Inner tank leakage	5 years	☒	☐	☐	Procedures: • lng operations procedures manual.pdf • Lawrence LNG STORAGE TANK INSPECTION.xlsx RTs: • QUARTERLY INSP-LNG TANK A or QRTLY INSP-LNG TANK A (QUARTERLY) • QUARTERLY INSP-LNG TANK B (QUARTERLY) • QUARTERLY INSP-LNG TANK C (QUARTERLY) • QUARTERLY INSP-LNG TANK D (QUARTERLY) • QUARTERLY INSP-LNG TANK E (QUARTERLY) Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
193.2623(c) (NFPA 59A 11.5.5.1(f))	Effectiveness/soundness of insulation	5 years	☒	☐	☐	Procedures: • Lawrence LNG STORAGE TANK INSPECTION.xlsx • lng operations procedures manual.pdf RTs: • QUARTERLY INSP-LNG TANK A or QRTLY INSP-LNG TANK A (QUARTERLY) • QUARTERLY INSP-LNG TANK B (QUARTERLY) • QUARTERLY INSP-LNG TANK C (QUARTERLY) • QUARTERLY INSP-LNG TANK D (QUARTERLY) • QUARTERLY INSP-LNG TANK E (QUARTERLY) Gaps: • None found
193.2623(d) (NFPA 59A 11.5.5.1(f))	Frost heave (i.e. tank foundation heating system operation)	5 years	☐	☐	☒	
193.2635(a) (NFPA 59A 11.5.6.4(a))	Buried or submerged components under cathodic protection are tested at least once each calendar year, not exceeding 15 months, to determine cathodic protection adequacy	Life of Facility	☐	☒	☐	Procedures: • lng operations procedures manual.pdf Documentation: • Lawrence LNG CP.pdf Gaps: • Records not provided for life of facility: see Section 193.2635(b).

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
193.2635(b) (NFPA 59A 11.5.6.4(b))	Rectifier or other impressed current power source is inspected at least 6 times each calendar year, but not exceeding 2.5 months, to ensure that it is operating properly.	Life of Facility	☐	☒	☐	Procedures: • lng operations procedures manual.pdf Documentation: • Lawrence LNG CP.pdf Gaps: • Rectifier readings were only provided for December 2013 to June 2020, but are required for life of the facility.
193.2635(c)	Each reverse current switch, each diode, and each interference bond whose failure would jeopardize component protection is electrically checked for proper performance at least 6 times each calendar year, not exceeding 2.5 months.	Life of Facility	☐	☐	☒	
193.2635(c) (NFPA 59A 11.5.6.4(c))	Non-critical interference bonds are checked at least once each calendar year, not exceeding 15 months.	Life of Facility	☐	☐	☒	
193.2635(d) (NFPA 59A 11.5.6.4(d))	Each component that is protected from atmospheric corrosion is inspected at intervals not exceeding 3 years.	Life of Facility	☐	☒	☐	Procedures: • lng operations procedures manual.pdf Gaps: • No records provided.
193.2635(e) (NFPA 59A 11.5.6.4(e))	Internal corrosion control monitoring devices are checked at least two times each calendar year, but not exceeding 7.5 months.	Life of Facility	☐	☐	☒	
193.2637 (NFPA 59A 11.5.6.5)	Prompt corrective or remedial action was taken whenever an operator learned by inspection or otherwise that atmospheric, external, or internal corrosion is not controlled as required	Life of Facility	☐	☒	☐	Procedures: • lng operations procedures manual.pdf Gaps: • Previous corrosion related repairs were noted, however records for these repairs were not provided.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**NA**	**Support Documentation and Identified Gaps**
193.2639(b)	Records or maps to show the location of cathodically protected components, neighboring structures bonded to the cathodic protection system, and corrosion protection equipment.	Life of Facility	☒	☐	☐	Procedures: • lng operations procedures manual.pdf Documentation: • Lawrence LNG CP.pdf Gaps: • None found.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2707(a)(b) (NFPA 59A 11.6.6, 11.6.7)	O&M of components was conducted by personnel who met the qualifications and training requirements, including proficiency test, or who were supervised by personnel who met the qualifications and training requirements.	Employment Duration plus 2 years	☒	☐	☐	Procedures: • lng operations procedures manual.pdf Statement: • Per CMA, only trained personnel are assigned tasks through the WMS system or a qualified contractor is hired to complete the task. The task is then marked complete by the trained staff member or by the lead plant operator or supervision if completed by a contractor. Gaps: • None found, procedures and CMA statement above supports this requirement.
193.2707(c)	Corrosion control procedures, including those for the design, installation, operation, and maintenance of cathodic protection systems, were carried out by, or under the direction of, a person qualified by experience and training in corrosion control technology.	Employment Duration plus 2 years	☐	☒	☐	Procedures: • lng operations procedures manual.pdf Statement: • Per CMA, Only OQ trained personnel are assigned tasks through the WMS system and for a given task, the individual marks it as complete electronically. Gaps: • No OQ records provided.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2713(a) (NFPA 59A 11.6.1)	Initial O&M training for operations, maintenance, and supervisory personnel to include: ▪ Characteristics & hazards of LNG and other flammable fluids used at the facility ▪ Potential hazards involved in O&M activities ▪ To carry out the O&M procedures related to assigned duties ▪ Emergency procedures related to assigned duties ▪ First-aid ▪ Facility operations, controls, & functions for operating and supervisory personnel ▪ LNG transfer procedures for operating and supervisory personnel	Employment Duration plus 2 years	☒ ☒ ☒ ☒ ☒ ☒ ☒	☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐	Procedures: • lng operations procedures manual.pdf • LNG Procedure Manual.doc Documentation: • Training binders for the following employees were inspected on site: ○ Tom Lafoe ○ Larry Guy ○ Dave Galeazzi ○ Steve McGinnity ○ David Williams Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records and employment start dates for some employees were not provided. Section 193.2713(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2713(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up operations & maintenance training every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • lng operations procedures manual.pdf • LNG Procedure Manual.doc Documentation: • Training binders for the following employees were inspected on site: ○ Tom Lafoe ○ Larry Guy ○ Dave Galeazzi ○ Steve McGinnity ○ David Williams Gaps: • Follow-up training appeared to occur every two years, as required, however initial training records and employment start dates for some employees were not provided.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2715(a) (NFPA 59A 11.6.1)	Initial security training for personnel responsible for security duties to include: ▪ Recognize breaches of security ▪ Carry out security procedures related to assigned function ▪ Recognize conditions where security assistance is needed ▪ Be familiar with basic plant operations and emergency procedures as needed for assigned duties	Employment Duration plus 2 years	☒ ☒ ☒ ☒	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	Procedures: • lng operations procedures manual.pdf • LNG Procedure Manual.doc Documentation: • Training binders for the following employees were inspected on site: ○ Tom Lafoe ○ Larry Guy ○ Dave Galeazzi ○ Steve McGinnity ○ David Williams Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records and employment start dates for some employees were not provided. Section 193.2715(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2715(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up security training every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • lng operations procedures manual.pdf • LNG Procedure Manual.doc Documentation: • Training binders for the following employees were inspected on site: ○ Tom Lafoe ○ Larry Guy ○ Dave Galeazzi ○ Steve McGinnity ○ David Williams Gaps: • Follow-up training appeared to occur every two years, as required, however initial training records and employment start dates for some employees were not provided.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(a) (NFPA 59A 11.6.1)	Initial fire protection training, including fire drills, for operations, maintenance, and supervisory personnel to include: ▪ Know the potential causes and areas of fire; ▪ Know the types, sizes, and predictable consequences of fire; and ▪ Know and be able to perform their assigned fire control duties and proper use of equipment	Employment Duration plus 2 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • lng operations procedures manual.pdf • LNG Procedure Manual.doc Documentation: • Training binders for the following employees were inspected on site: ○ Tom Lafoe ○ Larry Guy ○ Dave Galeazzi ○ Steve McGinnity ○ David Williams Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records and employment start dates for some employees were not provided. Section 193.2715(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up fire protection training, including fire drills, every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • lng operations procedures manual.pdf Documentation: • Training binders for the following employees were inspected on site: ○ Tom Lafoe ○ Larry Guy ○ Dave Galeazzi ○ Steve McGinnity ○ David Williams Gaps: • Follow-up training appeared to occur every two years, as required, however initial training records and employment start dates for some employees were not provided.
193.2717(c)	Plant fire drills provide personnel hands-on experience in carrying out their duties under the fire emergency procedures	Employment Duration plus 2 years	☐	☒	☐	Procedures: • lng operations procedures manual.pdf Gaps: • Fire drills are not regularly performed

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2603(c)(d) (NFPA 59A 11.5.7.1, 11.5.1.6, 11.5.1.7)	Each component taken out of service is identified in the records, including the date taken out of, or placed into service. If a safety device is taken out of service for maintenance, the component being served by the device is taken out of service unless the same safety function is provided by an alternate means.	5 years	☐ ☐	☒ ☒	☐ ☐	Procedures: • 193.2603 General Maintenance Requirements.doc Documents: • None provided. Gaps: • Lockout/Tagout records were provided for 2015-2018, but do not appear to include lockout/tagout related to RV servicing specifically. No 2019 lockout/tagout records were provided. • Plant personnel indicate equipment is isolated and taken out of service, but is not recorded as a lockout/tagout, prior to servicing safety devices.
193.2609 (NFPA 59A 11.5.1.3)	Each support system or foundation of each component is inspected for any detrimental change that could impair support at least annually.	5 years	☒	☐	☐	Procedures: • 193.2609 support systems.doc RTs: • 283 STRUCTURAL SUPPORT- AREA A (MONTHLY) • 284 STRUCTURAL SUPPORT- AREA B (MONTHLY) • 285 STRUCTURAL SUPPORT- AREA C (MONTHLY) • 286 STRUCTURAL SUPPORT- AREA D (MONTHLY) Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2611(a)	Maintenance activities on fire control equipment is scheduled so that a minimum of equipment is taken out of service at any one time and is returned to service in a reasonable period of time.	5 years	☒	☐	☐	Procedures: • 193.2611 Fire protection systems.doc Gaps: • Plant personnel indicate fire control equipment vendor does not remove equipment from plant during maintenance/servicing.
(NFPA 59A 11.5.1.11)	The insulation for impounding surfaces is inspected annually to ensure that it is suitable for the intended service.	5 years	☐	☐	☒	

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2613 (NFPA 59A 11.5.1.4)	Auxiliary power source tested monthly to check its operational capability	5 years	☒	☐	☐	Procedures: • 193.2613 Aux power source.doc RTs: • 078 6 MO EMGCY GEN INSP-LUD (BI-ANNUAL) • 081 AUTO TRANSFER SWITCH (BI-ANNUAL) • 009 CRTICL PWR BATTERY BANK (QUARTERLY) • 010 CMPTR INVTR BATTERY BANK (QUARTERLY) • 074 EMERGENCY GENERATOR EG101 (QUARTERLY) • 075 LUDLOW BATTERIES EG101B (QUARTERLY) • 079 EMERGENCY GENERATOR EG101 (MONTHLY) Gaps: • 074 EMERGENCY GENERATOR EG101 and 075 LUDLOW BATTERIES EG101B are missing in 2019, but the generator was removed so this is to be expected. Generator rental company has been performing maintenance on rental generator.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2613 (NFPA 59A 11.5.1.4 11.5.1.5)	Auxiliary power source 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.	5 years	☒ ☒	☐ ☐	☐ ☐	Procedures: • 193.2613 Aux power source.doc RTs: • 073 EMERGENCY GENERATOR EG101 (ANNUAL) Gaps: • None found.
193.2617(a) (NFPA 59A 11.5.4)	Repair work on components is performed and tested in a manner which: (1) As far as practicable, complies with the applicable requirements of Subpart D (construction) of this part; and (2) Assures the integrity and operational safety of the component being repaired. (3) Safety of personal and property during a repair activity is maintained	5 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • No procedure for repair work on components. RTs: The following provide examples of repair work from 2015 to support this requirement: • LUD LNG REP PSV 028 • LUD LNG REP PSV 029 • MAINTENANCE OF COMPRESSOR • REP HARTZELL HEATER LUDLOW LNG • REPAIR COOLING TOWER #1 • REPAIR BOIL OFF COMPRESSOR • REPAIR E-101 DEHYDRATOR • REPAIR AIR INTAKE UNIT #1 • REPLACE COMP COOLING PUMP • REPAIR PUMP NOT STARTING • REPAIR TRUCK LOADING PUMP A • REPAIR ON BOILOFF COMP A • REPLACE RELAYS ON REGEN HTR • REPAIR FRONT GATE CONTROL • REPAIR LEAK ON VALVE

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• REPAIR HEATER • REPAIR FRONT GATE • REPAIR LUD GAS DETECTORS • REPLACE SMOKE DETECTOR • SERVICE BOIL OFF COMPR B • SERVICE C101 REFRIGERANT • WORK ON LOADING PUMP B • MAINT OF TRUCK LOADING PUMP B • MAINT OF BOIL OFF COMPR A • MAINTENANCE WORK LNG-C-101 • MAINTENANCE-COOLING TOWER#1&2 Gaps: • Missing repair work procedure. This procedure is required for compliance with O&M Procedure requirements.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(b) (NFPA 59A 11.5.5.1)	If a control system is out of service for 30 days or more, it is inspected and tested for operational capability before returning it to service.	5 years	☐	☒	☐	Procedures: • 193.2619 Maint Control Sys.doc Gaps: • The emergency generator was taken out of service during the inspection period. Inspection of the project binder indicated completed commissioning forms were not included or otherwise provided. Unable to confirm control system was inspected prior to entering service.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(c) (NFPA 59A 11.5.5.1(d)	Control systems in service, but not normally in operation, are inspected and tested once each calendar year, not exceeding 15 months such as: • Relief valves • Automatic shutdown devices • Control systems for internal shutoff valves for bottom penetration tanks	5 years	 ☐ ☐ ☐	 ☒ ☒ ☒	 ☐ ☐ ☐	Procedures: • 193.2619 Maint Relief Valves.doc RTs: • Safety & Relief Valves – Annual Inspection: 63 RTs. Search for "SAFETY VALVE". • 082 ESD CIRCUIT/BUTTON /SWITCH (QUARTERLY) Gaps: • 082 ESD CIRCUIT/BUTTON/ SWITCH is missing one quarter in 2018. • Safety Valves PSV 76, PSV 77, PSV 78 are missing in 2018 • Safety Valves PSV 28 and PSV 29 (both top of tank) have been serviced by a vendor starting in 2016. RTs for these SVs do not appear after 2015. • The plant P&ID's are not complete and do not appear to represent current conditions. Without an updated set of plant P&IDs, it is difficult for third party auditors to independently verify that maintenance performed for relief valves is being tracked adequately and entirely by RTs.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(c)(1) (NFPA 59A 11.5.5.1(b))	Control systems used seasonally, such as for liquefaction or vaporization, are inspected and tested before use each season.	5 years	☐	☒	☐	Procedures: • 193.2619 Maint Control Sys.doc • 193.2619 Maint Instrument.doc RTs: (Liquefaction) • 015 REFRIGERANT COMPRESSOR (QUARTERLY) • 052 RFRGRNT SUCTION SCRUB D104 (QUARTERLY) • 054 REF DISCHG SEPARATOR D105 (QUARTERLY) • 056 HEAVYS REMOVAL SEPARATOR (ANNUAL) • 057 HEAVYS REMOVAL SEPARATOR (ANNUAL) • 060 REFRIGER. DEHYDRATOR D108 (ANNUAL) • 041 DEHYDRATOR D101 (QUARTERLY) • 042 GAS FEED DEHYDRATOR D101 A (ANNUAL) • 043 DEHYDRATOR D101B (QUARTERLY) • 044 GAS FEED DEHYDRATOR D101 B (ANNUAL) • 047 CO2 ABSORBER D102A (QUARTERLY) • 048 CO2 ABSORBER D102B (QUARTERLY) • 049 CO2 ABSORBER D102C (QUARTERLY) • 062 VENT KNOCKOUT SYSTEM D110 (ANNUAL)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• 064 COLD BLOW DN DRUM D111 (ANNUAL) • 066 HEAVYS REVAP CONT D112 (ANNUAL) • 068 REGENERTN GAS SEP D113 (ANNUAL) • 072 LUBE OIL STG TK C104 (ANNUAL) • 089 REGENERATION GAS COOL E101 (BI-ANNUAL) • 090 REGENERATION GAS COOL E101 (QUARTERLY) • 091 REGENERATION GAS COOL E101 (BI-ANNUAL) • 092 REGENERATION GAS E101 (QUARTERLY) • 095 INSP-LUD-E-101 DEHYD (BI-ANNUAL) • 096 INSP-LUD-E-101 DEHYRD (QUARTERLY) • 097 INSP-LUD-E-101 DEHYDR (BI-ANNUAL) • 098 INSP-LUD-E101 DEHYDR (QUARTERLY) • 101 REFRIGERANT CONDENSER E104 (ANNUAL) • 103 COLD BOX E105 (BI-WEEKLY) • 104 COLD BOX E105 (ANNUAL) • 105 E105 RFRGRN EXCHANGER (ANNUAL) • 115 GAS FEED FILTER F101 (ANNUAL) • 117 CLEAN GAS ILTER F102A (ANNUAL) • 118 CLEAN GAS FILTER F102B (ANNUAL)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• 120 REFRIGERANT GUARD FIL F103 (ANNUAL) • 160 H-102 DEHYDRATOR GAS HEATE (ANNUAL) • 162 CO2 REGEN HTR H102 (ANNUAL) • 163 CO2 REGEN GAS HTR H100 (QUARTERLY) • 173 NITROGEN GENERATOR PK101 (ANNUAL) (Vaporization) • 165 LNG VAPOR A ANNUAL H103A (ANNUAL) • 166 H103A LNG VAPORIZER (QUARTERLY) • 167 H103B VAPORIZER (QUARTERLY) • 168 H103B LNG VAPORIZER (ANNUAL) • 169 H103C LNG VAPORIZERS (QUARTERLY) • 170 H103C LNG VAPORIZERS (ANNUAL) • 171 VAPORIZERS H013A,B,C (ANNUAL) Gaps: • 072 LUBE OIL STG TK C104 is missing in 2018 and 2019; expected because this storage tank has been out of service since 2015 (or earlier) • 096 INSP-LUD-E-101 DEHYRD is missing one quarter in 2015

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(c)(2) (NFPA 59A 11.5.5.1(c))	Control systems that are intended for fire protection are inspected and tested at regular intervals not to exceed 6 months.	5 years	☒	☐	☐	Procedures: • 193.2619 Maint UVIR Gas Det.doc • 193.2619 Maint Fire Sys.doc • 193.2619 Maint Proprietary System.doc • 193.2619 Maint Local Signal.doc RTs: • 132 ANSOL FIRE SKIDS (ANNUAL) • 123 FIRE SKIDS (BI-ANNUAL) • 077 EMERG EXIT LGTS (QUARTERLY) • 139 HALON SYSTEM #1,#2,#3 (BI-ANNUAL) • LUD LNG CK SMOKE1 THRU SMOKE9 (QUARTERLY) • LUD LNG CHECK UVIR1 THRU UVIR9 (QUARTERLY) • 146 HAZ GAS DECT AIS-08A,&08D (QUARTERLY) Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(d)	Control systems that are normally in operation, such as required by a base load system, are inspected and tested once each calendar year but with intervals not exceeding 15 months.	5 years	☒	☐	☐	Procedures: • 193.2619 Maint Instrument.doc • 193.2619 Maint Storage tank.doc RTs: Instruments: • 084 CHROMATOGRAPH NGC8206 (WEEKLY) • PLANT INLET PT LUDLOW LNG (ANNUAL) • PLT INLET PRESS RECORDER LUD (ANNUAL) • PLT OUTLET PT LUD LNG (ANNUAL) • PLT OUTLET PRESS RECORDER LUD (ANNUAL) • Search for “PLT INSP-LUD-R” Results in 79 RT entries for instrument calibrations. Storage Tanks: • 277 LNG STOR.TNK ANNUAL ST-105 (ANNUAL) • 278 LNG STOR.TANK WEEKLY ST105 (WEEKLY) Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(e)	Relief valves are inspected and tested for verification of the valve seat lifting pressure and reseating.	5 years	☐	☒	☐	Procedures: • 193.2619 Maint Releif Valves.doc RTs: • Safety & Relief Valves – Annual Inspection: 63 RTs. Search for "SAFETY VALVE". Gaps: • Reference section 193.2619(c) for list of missing relief valves. • Invoices/Reports from third party testing company were not provided to verify valve seat lifting pressure and reseating.
193.2605(b)	Inspection/testing per operator's maintenance manual for all other applicable components not listed in the line items above such as: • Boiloff gas compressors • Instrument air system • ESD system • Fire protection water systems • Fire extinguishers • Cooling towers • LNG Personal Protective Equipment • Security & communications systems • Fence/Gates • LNG pumps • Truck pump • Truck scale & misc • Vent stacks • Odorant system • Regulator • Plant valves • Miscellaneous	5 years	 ☒ ☒ ☐ ☒ ☒ ☒ ☐ ☒ ☐ ☒ ☒ ☐ ☒ ☐ ☒ ☐ ☐	 ☐ ☐ ☒ ☐ ☐ ☐ ☒ ☐ ☒ ☐ ☐ ☒ ☐ ☒ ☐ ☒ ☒	 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Procedures: • 193.2619 Maint Fire Hyd.doc • 193.2605 1.1 Intro Fed Reg.doc • 193.2605 3.0 relief valve.doc • 193.2605 Index.doc RTs: Boiloff Gas Compressors: • 016 BOILOFF COMPRESSOR (ANNUAL) • 024 BOILOFF COM C012B (ANNUAL) • 025 BOILOFF COMC102N (QUARTERLY) • 020 BOILOFF COM C102A (ANNUAL) • 017 BOIL OFF CMP (BI-ANNUAL) • 018 BOILOFF CMP A&B (QUARTERLY)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• 019 BOILOFF CMP C012A &B (QUARTERLY) • 021 BOILOFF CMP C012 A & B (QUARTERLY) • 022 BOILOFF COMC012A (BI-WEEKLY) • 108 BOILOFF GAS INTER & AFTER (BI-ANNUAL) • 109 BOILOFF GAS INTER&AFTER (BI-WEEKLY) • 110 BOILOFF COMP E107 (MONTHLY) Instrument Air System: • 034 INSTRUMENT AIR DRYER (ANNUAL) • 028 INST AIR CM C013 A & B (ANNUAL) • 029 INST AIR CMC013A (BI-ANNUAL) • 030 INST AIR CM C013A (QUARTERLY) • 032 INST AIR CMC103B (QUARTERLY) • 033 INST AIR CM C103B (BI-ANNUAL) • 031 INSP-LUD-INST AIR CMA-B (MONTHLY) • 070 INST AIR REC D114 (WEEKLY) Cooling Towers: • 037 COOLING TOWER 1 CT101 (ANNUAL) • 038 COOLING TOWER 2 (MONTHLY) • 039 TEST WATER CT101 (WEEKLY) • 252 COOLING WTR PUMP P103 A&B (QUARTERLY) • 253 COOLING WTR PUMPS P103 A&B (WEEKLY)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• 254 COOL.WATER PUMP P103 A&B (ANNUAL) • 255 COOLING WATER PUMPS P103 A (QUARTERLY) • 256 COOLING WATER PUMPS P103 B (ANNUAL) • 257 COOLING WATER PUMPS P103 B (QUARTERLY) • INSP COOLING TOWER BALL VLV (ANNUAL) • LUDLOW LNG P103C ANNUAL (ANNUAL) ESD System: • 082 ESD CIRCUIT/BUTTON /SWITCH (QUARTERLY) Fire Extinguishers: • 125 FIRE EXTINGUISHERS (MONTHLY) • 126 FIRE EXTINGUISHERS (MONTHLY) • 127 HAND FIRE EXTINGUISHER (BI-ANNUAL) • 128 HAND FIRE EXTINGUISHER (BI-ANNUAL) Fire Protection Water Systems: • 262 FIRE WTR PUMP ENGINE P109 (BI-ANNUAL) • 263 FIRE WTR PUMP ENGINE P109 (MONTHLY) • 129 FIREHOSES (ANNUAL)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• 131 FIRE HYDRANTS – 7 (BI-ANNUAL) • 122 FIRE SHEDS (3) (MONTHLY) • 124 AIRPACKS (MONTHLY) • 260 FIRE WATER PUMP P109 (QUARTERLY) • 261 FIRE WATER PUMP P109 (ANNUAL) Emergency Response Equipment: • 134 FIRST AID KIT,SAFETY GEAR (ANNUAL) • 135 FIRST AID EQUIP (MONTHLY) • 136 EMRGNCY RESPONSE FOOTLKR (BI-ANNUAL) Security & Communications Systems: • 013 INTER TELE SYSTEM (QUARTERLY) • ANNUAL CK OF VOICE ANNUCIATOR- (2015) • 149 SECURITY SYSTEM SS-04 (QUARTERLY) • 150 LUDLOW ROAD CAMERA (BI-ANNUAL) • CONTROL ROOM OPERATOR STATION (ANNUAL) Fence/Gates: • 155 GATE INSP QRTLY LUD RAVENW (QUARTERLY) • 156 GATE INSP MTHLY LUD RAVENW (MONTHLY) • 332 FENCE INSP MNTHLY RAVENWOO (MONTHLY)

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						LNG Pumps: • 247 SEND OUT PUMP P102A (ANNUAL) • 248 LNG SEND OUT PUMP 102B (ANNUAL) • 249 SEND OUT PUMP P102C (ANNUAL) • 246 CIRCULATE ST 105 P102ABC (WEEKLY) Truck Pumps: • 269 TRUCK OUT PUMP P202 A&B (QUARTERLY) • 270 TRUCK LOAD PUMP P202 A&B (QUARTERLY) • 271 TRUCK LOAD PUMP P202 A (QUARTERLY) • 272 TRUCK LOAD PUMP P202 B or 273 TRUCK LOAD PUMP P202 B (QUARTERLY) Trucking Miscellaneous: • 289 TRK LOAD-SCALE-WATER SUMP (BI-WEEKLY) • GAU INSP-LUD-RAVENWOOD DR • TRUCKING GROUND CLAMP GC1 GC2 (QUARTERLY) Vent Stacks: • 301 PROCESS VENT STACK VS-101 (ANNUAL) • 302 VAPOR VENT STACK VS102 (ANNUAL) Odorant System: • ANNUAL INSP ODORANT TANK W/CTR (ANNUAL) • PLT INSP-LNG ODORIZER (MONTHLY) • ODR INSP-LUD or MONTHLY INSP-

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						ODORIZER-LNG PLNT (MONTHLY) • 282 ODORANT TANK ST-107 (BI-ANNUAL) Regulator: • 326 REGULATOR FEED GAS LUD-1 (ANNUAL) • REG INSP-LUD-RAVENWOOD DR (BI-ANNUAL) Plant Valves: • 330 UPSTREAM CONTROL VALVE (BI-WEEKLY) • 174 ORBIT VALVE MC KV-00 (QUARTERLY) • 175 PLT VALVES HV,FV,PV,TV (ANNUAL) • Search for "PLT INSP-LUD-R" results in 25 entries for stroking valves Miscellaneous: • 244 PORTABLE WATER PUMP P-1 (ANNUAL) • 266 WELL WATER PUMP P111 (ANNUAL) • 267 INSP-LUD-WELL P111 (QUARTERLY) • 281 HAZ WASTE INS-OIL TANK 106 (WEEKLY) • LUD LNG CHECK PLANT LIGHTING (QUARTERLY) • 087 ETHYLENE TRAILER (BI-ANNUAL) • INVENTORY/CONDITION OF LNG PPE (BI-ANNUAL, 8 EMPLOYEES) • 006 ROOF VENT FANS 1-3 (BI-ANNUAL) Gaps: • 082 ESD CIRCUIT/BUTTON/

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**

						SWITCH is missing one quarter in 2018.
						• CONTROL ROOM OPERATOR STATION is missing in 2016, 2017, 2018, 2019
						• 155 GATE INSP QRTLY LUD RAVENW is missing 1 quarter in 2019
						• 156 GATE INSP MTHLY LUD RAVENW is missing 3 months in 2019
						• TRUCKING GROUND CLAMP GC1 GC2 is missing 1 quarter in 2015
						• MONTHLY INSP-ODORIZER-LNG PLNT is missing 1 month in 2015
						• Valve Stroking:
						  ○ 175 PLT VALVES HV,FV,PV,TV is missing in 2017
						  ○ PLT INSP-LUD-RVNWD-C101 VANE A is missing in 2016
						  ○ PLT INSP-LUD-RAVENWOOD-PV-23 is missing in 2016, 2017, 2018, and 2019
						  ○ PLT INSP-LUD-RVNWD-TANK VENT V is missing in 2017
						• 266 WELL WATER PUMP P111 is missing in 2018 and 2019
						• INVENTORY/CONDITION OF LNG PPE

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						○ 2016: Izabel & Beaudry only have one inspection ○ 2017: Izabel & Beaudry have no inspections. Ryea only has one inspection. ○ 2018: Izabel, Beaudry & Docherty have no inspections ○ 2019: Izabel, Beaudry, Docherty have no inspections. Alves has only one inspection.
193.2621(a) (NFPA 59A 8.7.5)	Hoses used in LNG or flammable refrigerant transfer systems are: Tested once each calendar year, but with intervals not exceeding 15 months, to the maximum pump pressure or relief valve setting;	5 years	☒	☐	☐	Procedures: • 193.2621 Trans Hoses.doc RTs: • 290 TRUCKING HOSES (ANNUAL) Gaps: • None found.
193.2621(b) (NFPA 59A 8.7.5)	Hoses visually inspected for damage or defects before each use.	5 years	☒	☐	☐	Procedures: • 193.2621 Trans Hoses.doc RTs: • Refer to LNG transfer procedures for this record. Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2623(a) (NFPA 59A 11.5.5.1(f)(g))	Each LNG storage tank is inspected or tested to verify that each of the following conditions does not impair the structural integrity or safety of the tank: (a) Foundation and tank movement during normal operation and after a major meteorological or geophysical disturbance.	5 years	☐	☒	☐	Procedures: • 193.2623 Maint Storage tanks.doc RTs: • 276 LNG STOR. TANK ST-105 (BIENNIAL) • 278 LNG STOR.TANK WEEKLY ST105 (WEEKLY) • TRANSOM READ (ANNUAL) • No major geological disturbances reported during audit period. Gaps: • TRANSOM READ is missing in 2016 • No survey provided for 2017
193.2623(b) (NFPA 59A 11.5.5.1(f))	Inner tank leakage	5 years	☒	☐	☐	Procedures: • 193.2623 Maint Storage tanks.doc RTs: • 278 LNG STOR.TANK WEEKLY ST105 (WEEKLY) Gaps: • None found.
193.2623(c) (NFPA 59A 11.5.5.1(f))	Effectiveness/soundness of insulation	5 years	☒	☐	☐	Procedures: • 193.2623 Maint Storage tanks.doc RTs: • 278 LNG STOR.TANK WEEKLY ST105 (WEEKLY) Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2623(d) (NFPA 59A 11.5.5.1(f))	Frost heave (i.e. tank foundation heating system operation)	5 years	☒	☐	☐	Procedures: • 193.2623 Maint Storage tanks.doc RTs: • 278 LNG STOR.TANK WEEKLY ST105 (WEEKLY) Gaps: • None found.
193.2635(a) (NFPA 59A 11.5.6.4(a))	Buried or submerged components under cathodic protection are tested at least once each calendar year, not exceeding 15 months, to determine cathodic protection adequacy	Life of Facility	☐	☒	☐	Procedures: • 193.2625 corrosion.doc Documentation: • Ludlow LNG CP.pdf Gaps: • Records not provided for life of facility: see Section 193.2635(b).
193.2635(b) (NFPA 59A 11.5.6.4(b))	Rectifier or other impressed current power source is inspected at least 6 times each calendar year, but not exceeding 2.5 months, to ensure that it is operating properly.	Life of Facility	☐	☒	☐	Procedures: • 193.2625 corrosion.doc Documentation: • Ludlow LNG CP.pdf Gaps: • Rectifier readings were only provided for Dec 2013 to June 2020, but are required for life of the facility.
193.2635(c)	Each reverse current switch, each diode, and each interference bond whose failure would jeopardize component protection is electrically checked for proper performance at least 6 times each calendar year, not exceeding 2.5 months.	Life of Facility	☐	☐	☒	
193.2635(c) (NFPA 59A 11.5.6.4(c))	Non-critical interference bonds are checked at least once each calendar year, not exceeding 15 months.	Life of Facility	☐	☐	☒	

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2635(d) (NFPA 59A 11.5.6.4(d))	Each component that is protected from atmospheric corrosion is inspected at intervals not exceeding 3 years.	Life of Facility	☐	☒	☐	Procedures: • 193.2625 corrosion.doc Documents: • No documentation provided. Gaps: • No pictures of insulated piping corrosion inspections were provided. Inspections of insulated piping are performed, but only while performing other work requiring removal of insulation. Corrosion inspections for insulated piping is not specifically scheduled.
193.2635(e) (NFPA 59A 11.5.6.4(e))	Internal corrosion control monitoring devices are checked at least two times each calendar year, but not exceeding 7.5 months.	Life of Facility	☐	☐	☒	
193.2637 (NFPA 59A 11.5.6.5)	Prompt corrective or remedial action was taken whenever an operator learned by inspection or otherwise that atmospheric, external, or internal corrosion is not controlled as required	Life of Facility	☒	☐	☐	Procedures: • 193.2637 Remedial Corr.Corr.doc RTs: • REPAIR VAPORIZER (2017) Gaps: • None found, procedures and sampling of repair tasks found to support this requirement.
193.2639(b)	Records or maps to show the location of cathodically protected components, neighboring structures bonded to the cathodic protection system, and corrosion protection equipment.	Life of Facility	☒	☐	☐	Procedures: • 193.2629 Ext Corrossion.doc Documentation: • Ludlow LNG CP.pdf Gaps: • None found.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2707(a)(b) (NFPA 59A 11.6.6, 11.6.7)	O&M of components was conducted by personnel who met the qualifications and training requirements, including proficiency test, or who were supervised by personnel who met the qualifications and training requirements.	Employment Duration plus 2 years	☒	☐	☐	Procedures: • No procedure for corrosion control procedures. Statement: • Per CMA Only trained personnel are assigned tasks through the WMS system and for a given task, the individual marks it as complete electronically. Gaps: • Missing corrosion control procedure. This procedure is required for compliance with O&M Procedure requirements.
193.2707(c)	Corrosion control procedures, including those for the design, installation, operation, and maintenance of cathodic protection systems, were carried out by, or under the direction of, a person qualified by experience and training in corrosion control technology.	Employment Duration plus 2 years	☐	☒	☐	Procedures: • No procedure for corrosion control procedures. Statement: • Per CMA, Only OQ trained personnel are assigned tasks through the WMS system and for a given task, the individual marks it as complete electronically. Gaps: • Missing corrosion control procedure. This procedure is required for compliance with O&M Procedure requirements. • Corrosion OQ records were not provided

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2713(a) (NFPA 59A 11.6.1)	Initial O&M training for operations, maintenance, and supervisory personnel to include: ▪ Characteristics & hazards of LNG and other flammable fluids used at the facility ▪ Potential hazards involved in O&M activities ▪ To carry out the O&M procedures related to assigned duties ▪ Emergency procedures related to assigned duties ▪ First-aid ▪ Facility operations, controls, & functions for operating and supervisory personnel ▪ LNG transfer procedures for operating and supervisory personnel	Employment Duration plus 2 years	☒ ☒ ☒ ☒ ☒ ☒	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	Procedures: • 193.2713 a Training Overview.doc • 193.2713 b Plant familiarization.doc • 193.2713 c Gen Safety.doc • 193.2713 d Monitor Leaks.doc • 193.2713 e Mon Foreign material.doc • 193.2713 f Trucking.doc • 193.2713 g Holding Mode.doc • 193.2713 h Vaporization.doc • 193.2713 ha Liquefaction.doc • 193.2713 i Maint System.doc • 193.2713 j Work Permits.doc • 193.2713 k Purge.doc • 193.2713 l Insp Support piping.doc • 193.2713 m Insp Tank.doc • 193.2713 n Insp Vap.doc • 193.2713 o Insp Fire prot.doc • 193.2713 p Emergency training.doc • 193.2713 q FirstAid Training.doc • 193.2713 table.doc Documents: • Training binders for the following employees were inspected on site: ○ Brian Grady

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
						○ Chris Warren ○ Daniel Langan ○ Gabriel Serrano ○ Joey Cardona ○ Karen Ryea ○ Mark Izabel Gaps: • Marked satisfactory to signify CMA meets training requirements, however start dates for employees were not provided, and as a result initial training cannot be verified. Section 193.2713(b) is marked unsatisfactory to signify records are not available. • Employment start & end dates for former employee Marion Boudry were not provided. Employee's training binder was not provided, however, It is unclear if this individual's training falls under the purview of this audit.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2713(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up operations & maintenance training every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Same as those listed for 193.2713(a) above. Documents: • Training binders for the following employees were inspected on site: ○ Brian Grady ○ Chris Warren ○ Daniel Langan ○ Gabriel Serrano ○ Joey Cardona ○ Karen Ryea ○ Mark Izabel Gaps: • Follow-up training appeared to occur every two years, as required, however initial training records and employment start dates for employees were not provided. • Employment start & end dates for former employee Marion Boudry were not provided. Employee's training binder was not provided, however, It is unclear if this individual's training falls under the purview of this audit.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2715(a) (NFPA 59A 11.6.1)	Initial security training for personnel responsible for security duties to include: ▪ Recognize breaches of security ▪ Carry out security procedures related to assigned function ▪ Recognize conditions where security assistance is needed ▪ Be familiar wit basic plant operations and emergency procedures as needed for assigned duties	Employment Duration plus 2 years	☒ ☒ ☒ ☒	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	Procedures: • 193.2715 Security Training.doc Documents: • Training binders for the following employees were inspected on site: ○ Brian Grady ○ Chris Warren ○ Daniel Langan ○ Gabriel Serrano ○ Joey Cardona ○ Karen Ryea ○ Mark Izabel Gaps: • Marked satisfactory to signify CMA meets training requirements, however start dates for employees were not provided, and as a result initial training cannot be verified. Section 193.2715(b) is marked unsatisfactory to signify records are not available. • Employment start & end dates for former employee Marion Boudry were not provided. Employee's training binder was not provided, however, It is unclear if this individual's training falls under the purview of this audit.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2715(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up security training every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • 193.2715 Security Training.doc Documents: • Training binders for the following employees were inspected on site: ○ Brian Grady ○ Chris Warren ○ Daniel Langan ○ Gabriel Serrano ○ Joey Cardona ○ Karen Ryea ○ Mark Izabel Gaps: • Follow-up training appeared to occur every two years, as required, however initial training records and employment start dates for employees were not provided. • Employment start & end dates for former employee Marion Boudry were not provided. Employee's training binder was not provided, however, It is unclear if this individual's training falls under the purview of this audit.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(a) (NFPA 59A 11.6.1)	Initial fire protection training, including fire drills, for operations, maintenance, and supervisory personnel to include: ▪ Know the potential causes and areas of fire; ▪ Know the types, sizes, and predictable consequences of fire; and ▪ Know and be able to perform their assigned fire control duties and proper use of equipment	Employment Duration plus 2 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • 193.2717 Fire prevention Training.doc • Overview.doc Documents: • Training binders for the following employees were inspected on site: ○ Brian Grady ○ Chris Warren ○ Daniel Langan ○ Gabriel Serrano ○ Joey Cardona ○ Karen Ryea ○ Mark Izabel Gaps: • Marked satisfactory to signify CMA meets training requirements, however start dates for employees were not provided, and as a result initial training cannot be verified. Section 193.2717(b) is marked unsatisfactory to signify records are not available. • Employment start & end dates for former employee Marion Boudry were not provided. Employee's training binder was not provided, however, It is unclear if this individual's training falls under the purview of this audit.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up fire protection training, including fire drills, every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • 193.2717 Fire prevention Training.doc • Overview.doc Documents: • Training binders for the following employees were inspected on site: ○ Brian Grady ○ Chris Warren ○ Daniel Langan ○ Gabriel Serrano ○ Joey Cardona ○ Karen Ryea ○ Mark Izabel Gaps: • Follow-up training appeared to occur every two years, as required, however initial training records and employment start dates for employees were not provided. • Employment start & end dates for former employee Marion Boudry were not provided. Employee's training binder was not provided, however, It is unclear if this individual's training falls under the purview of this audit.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(c)	Plant fire drills provide personnel hands-on experience in carrying out their duties under the fire emergency procedures	Employment Duration plus 2 years	☒	☐	☐	Procedures: • 193.2717 Fire prevention Training.doc • Overview.doc RTs: • 080 EVACUATION DRILL (ANNUAL) • Fire drills, separate from above, are performed bi-annually. Spot check indicates these are performed and record in the log book. Gaps: • 080 EVACUATION DRILL is missing in 2016. Item is marked satisfactory, as spot check indicates fire drills appear (which are separate from evacuation drills) are scheduled and occur.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2603(c)(d) (NFPA 59A 11.5.7.1, 11.5.1.6, 11.5.1.7)	Each component taken out of service is identified in the records, including the date taken out of, or placed into service. If a safety device is taken out of service for maintenance, the component being served by the device is taken out of service unless the same safety function is provided by an alternate means.	5 years	☐ ☐	☒ ☒	☐ ☐	Procedures: • General Maintenance Requirements.doc Gaps: • Plant personnel indicate they lockout/tagout and isolate equipment prior to servicing safety devices, however records are not available to support.
193.2609 (NFPA 59A 11.5.1.3)	Each support system or foundation of each component is inspected for any detrimental change that could impair support at least annually.	5 years	☒	☐	☐	Procedures: • Procedure for the Inspection of Support Systems.doc RTs: • MONTHLY-FOUNDATIONS Gaps: • None found.
193.2611(a)	Maintenance activities on fire control equipment is scheduled so that a minimum of equipment is taken out of service at any one time and is returned to service in a reasonable period of time.	5 years	☐	☒	☐	Procedures: • Fire Protection System.doc Gaps • Records are not available to support.
(NFPA 59A 11.5.1.11)	The insulation for impounding surfaces is inspected annually to ensure that it is suitable for the intended service.	5 years	☐	☐	☒	
193.2613 (NFPA 59A 11.5.1.4)	Auxiliary power source tested monthly to check its operational capability	5 years	☒	☐	☐	Procedures: • Auxiliary Power Source.doc RTs: • MONTHLY-EMERGENCY GENERATOR Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2613 (NFPA 59A 11.5.1.4 11.5.1.5)	Auxiliary power source 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.	5 years	☐ ☐	☒ ☒	☐ ☐	Procedures: • Auxiliary Power Source.doc RTs: • None Gaps: • The generator capacity test is not performed with the full running load of the plant.
193.2617(a) (NFPA 59A 11.5.4)	Repair work on components is performed and tested in a manner which: (1) As far as practicable, complies with the applicable requirements of Subpart D (construction) of this part; and (2) Assures the integrity and operational safety of the component being repaired. (3) Safety of personnel and property during a repair activity is maintained	5 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • Copy of General Maintenance.doc • Repairs.doc RTs: The following provide examples of repair work from 2015 to support this requirement: • REPAIR VACUUM PUMP • REPAIR GENERATOR • REPAIR ON ODORIZER • REPAIR LNG TANK • ASSIST WELDING ON VAPORIZER • CK/REPAIR PROBLEM W/GENERATOR • WORK ON LNG PUMP Gaps: • None found.
193.2619(b) (NFPA 59A 11.5.5.1)	If a control system is out of service for 30 days or more, it is inspected and tested for operational capability before returning it to service.	5 years	☒	☐	☐	Procedures: • Control Systems.doc RTs: • None. Gaps: • None. Systems have not been taken out of service within minimum records retention period.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(c) (NFPA 59A 11.5.5.1(d)	Control systems in service, but not normally in operation, are inspected and tested once each calendar year, not exceeding 15 months such as: • Relief valves • Automatic shutdown devices • Control systems for internal shutoff valves for bottom penetration tanks	5 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • Control Systems.doc RTs: • Relief Valves – Annual Inspection: 22 RTs. Search for “RV”. • ANNUAL-TANK • MTHLY-ESD-EMERGENCY SHUT DOWN Gaps: • The plant P&ID’s are not complete and do not appear to represent current conditions. Without an updated set of plant P&IDs, it is difficult for third party auditors to independently verify that maintenance performed for relief valves is being tracked adequately and entirely by RTs.
193.2619(c)(1) (NFPA 59A 11.5.5.1(b))	Control systems used seasonally, such as for liquefaction or vaporization, are inspected and tested before use each season.	5 years	☒	☐	☐	Procedures: • Control Systems.doc RTs: • ANN INSP-TEST RUN THE PLANT • ANNUAL-VAPORIZER-TEST • ANNUAL-LNG PUMP • ANNUAL-PRODUCT PUMP • ANN INSP-VAPORIZER • Gaps: • None found.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(c)(2) (NFPA 59A 11.5.5.1(c))	Control systems that are intended for fire protection are inspected and tested at regular intervals not to exceed 6 months.	5 years	☐	☒	☐	Procedures: • Control Systems.doc • Gas Detection Systems.doc • UV Detectors.doc • Proprietary Signaling Systems.doc • Local Protective Signaling Systems.doc • Fire Protection Equipment & Systems.doc RTs: • MONTHLY-HAZ GAS DETECTOR • INSP UV/IR • Note: audible/visual fire indicators are tested monthly as part of the UV/IR system test/inspection. Gaps: • Fire pull box is not tested.
193.2619(d)	Control systems that are normally in operation, such as required by a base load system, are inspected and tested once each calendar year but with intervals not exceeding 15 months.	5 years	☒	☐	☐	Procedures: • Control Systems.doc RTs: • ANNUAL-TANK • ANNUAL-DP CELL • ANNUAL-VACUUM PUMP • ANNUAL-PRODUCT PUMP Gaps: • None found.

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Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2619(e)	Relief valves are inspected and tested for verification of the valve seat lifting pressure and reseating.	5 years	☒	☐	☐	Procedures: • RV-100.doc through RV-600.doc, 20 items total. RTs: • Relief Valves – Annual Inspection: 22 RTs. Search for "RV". Gaps: • None found.
193.2605(b)	Inspection/testing per operator's maintenance manual for all other applicable components not listed in the line items above such as:	5 years				Procedures: • Control Systems.doc • Gas Detection Systems.doc • U V Detectors.doc • Local Protective Signaling Systems.doc • Fire Protection Equipment & Systems.doc • Fire Hydrants.doc RTs: • MONTHLY-FOUNDATIONS • ANNUAL-LNG PUMP • QUARTERLY-OUTLET VALVE • ANN INSP-VAPORIZER • ANNUAL INSP – MFD GATE • MONTHLY INSP-ODORIZER • MONTHLY-ODORIZER • MTHLY-ESD-EMERGENCY SHUT DOWN • 7 Monthly Fire Extinguishers (#75, 76, 77, 78, 79, 81,82) • ANN INSP-ALL FIRE EXT W/CNTR • MONTHLY FIRE FIGHTING EQ
	• ESD system		☒	☐	☐	
	• Orifice Plate		☐	☒	☐	
	• Odorant System		☐	☒	☐	
	• LNG Pumps		☒	☐	☐	
	• Pipe Supports & Foundations		☒	☐	☐	
	• Plant Valves		☒	☐	☐	
	• Security Gate Control Mechanism		☒	☐	☐	
	• Vaporizers		☒	☐	☐	
	• Fire protection water systems		☒	☐	☐	
	• Hazardous Gas Detection		☒	☐	☐	
	• Fire extinguishers		☒	☐	☐	
	• Fire Skids		☒	☐	☐	
	• Fire Hydrants		☒	☐	☐	

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
						• ANNUAL-FIRE EXTINGUISHER #75 • ANNUAL-FIRE EXTINGUISHER #76 • ANNUAL-FIRE EXTINGUISHER #77 • ANNUAL-FIRE EXTINGUISHER #78 • ANNUAL-FIRE SKID #76 • ANNUAL-FIRE SKID #77 • ANNUAL-FIRE SKID #78 • MONTHLY-HAZ GAS DETECTOR • INSP UV/IR • MFD-OUTLET PRESSURE TRANSMITTER • MONTHLY INSP-CHROMATOGRAPH • Recommended to remove UV/IR inspection and MONTHLY-HAZ-GAS DETECTOR from this section, as they are already present in 193.2619(c)(2) Gaps: • No orifice plate RT. • MONTHLY-ODORIZER missing 2/2015.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2621(a) (NFPA 59A 8.7.5)	Hoses used in LNG or flammable refrigerant transfer systems are: Tested once each calendar year, but with intervals not exceeding 15 months, to the maximum pump pressure or relief valve setting;	5 years	☒	☐	☐	Procedures: • Hoses.doc RTs: • MONTHLY-LNG HOSE #1 INSP • MONTHLY LNG HOSE #2 INSP • ANNUAL-LNG HOSE #1 INSP • ANNUAL-LNG HOSE #2 INSP • ANNUAL-TRK UNLOAD PUMP Gaps: • None found.
193.2621(b) (NFPA 59A 8.7.5)	Hoses visually inspected for damage or defects before each use.	5 years	☒	☐	☐	Procedures: • Hoses.doc RTs: • Refer to LNG transfer procedures for this record. Gaps: • None found.
193.2623(a) (NFPA 59A 11.5.5.1(f)(g))	Each LNG storage tank is inspected or tested to verify that each of the following conditions does not impair the structural integrity or safety of the tank: (a) Foundation and tank movement during normal operation and after a major meteorological or geophysical disturbance.	5 years	☐	☒	☐	Procedures: • No procedure for tank surveying is available. RTs: • TRANSOM READ Gaps: • TRANSOM READ missing in 2016, 2017, 2018. • There is no procedure for yearly tank foundation surveying.

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2623(b) (NFPA 59A 11.5.5.1(f))	Inner tank leakage	5 years	☒	☐	☐	Procedures: • No procedure for testing for inner tank leakage is available. RTs: • ANNUAL-TANK • Daily Inspection Sheet Gaps: • None found. Notes: • Missing storage tank procedure. This procedure is required for compliance with O&M Procedure requirements.
193.2623(c) (NFPA 59A 11.5.5.1(f))	Effectiveness/soundness of insulation	5 years	☐	☒	☐	Procedures: • No procedure for testing for insulation inspection is available. • RTs: • ANNUAL-TANK • MONTHLY-VACUUM PUMP • ANNUAL-VACUUM PUMP Gaps: • MONTHLY-VACUUM PUMP missed in 10/2015 Notes: • Missing storage tank procedure. This procedure is required for compliance with O&M Procedure requirements.
193.2623(d) (NFPA 59A 11.5.5.1(f))	Frost heave (i.e. tank foundation heating system operation)	5 years	☐	☐	☒	

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2635(a) (NFPA 59A 11.5.6.4(a))	Buried or submerged components under cathodic protection are tested at least once each calendar year, not exceeding 15 months, to determine cathodic protection adequacy	Life of Facility	☐	☒	☐	Procedures: • #1932635 Corrosion Control.doc • General Procedures.doc Documentation: • Marshfield LNG CP.pdf Gaps: • Records not provided for life of facility: see Section 193.2635(b).
193.2635(b) (NFPA 59A 11.5.6.4(b))	Rectifier or other impressed current power source is inspected at least 6 times each calendar year, but not exceeding 2.5 months, to ensure that it is operating properly.	Life of Facility	☐	☒	☐	Procedures: • #1932635 Corrosion Control.doc • General Procedures.doc Documentation: • Marshfield LNG CP.pdf Gaps: • Rectifier readings were only provided for January 2014 to November 2019, but are required for life of the facility.
193.2635(c)	Each reverse current switch, each diode, and each interference bond whose failure would jeopardize component protection is electrically checked for proper performance at least 6 times each calendar year, not exceeding 2.5 months.	Life of Facility	☐	☐	☒	
193.2635(c) (NFPA 59A 11.5.6.4(c))	Non-critical interference bonds are checked at least once each calendar year, not exceeding 15 months.	Life of Facility	☐	☐	☒	

Maintenance Records Requirement per 49CFR 193.2639 and NFPA 59A (2001 ed) 11.5.7						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Records Retention Period**	**S**	**U**	**N/A**	**Support Documentation and Identified Gaps**
193.2635(d) (NFPA 59A 11.5.6.4(d))	Each component that is protected from atmospheric corrosion is inspected at intervals not exceeding 3 years.	Life of Facility	☐	☒	☐	Procedures: • #1932635 Corrosion Control.doc • General Procedures.doc RTs & Other Documentation: • Every three years a random piece of insulation is removed and underlying piping is inspected for corrosion. • For exposed, above-ground piping, daily Exception Shift Report indicates personnel monitor for corrosion at the start of every shift. Gaps: • Inspection records for insulated piping are not available.
193.2635(e) (NFPA 59A 11.5.6.4(e))	Internal corrosion control monitoring devices are checked at least two times each calendar year, but not exceeding 7.5 months.	Life of Facility	☐	☐	☒	
193.2637 (NFPA 59A 11.5.6.5)	Prompt corrective or remedial action was taken whenever an operator learned by inspection or otherwise that atmospheric, external, or internal corrosion is not controlled as required	Life of Facility	☒	☐	☐	Procedures: • Remedial Measures.doc RTs: • WELD EXTERIOR ON VAPORIZER Gaps: • None found, procedures and sampling of repair tasks found to support this requirement.
193.2639(b)	Records or maps to show the location of cathodically protected components, neighboring structures bonded to the cathodic protection system, and corrosion protection equipment.	Life of Facility	☐	☒	☐	Procedures: • D O T Federal Register Regulation 193.2639.doc RTs & Documentation: • Marshfield LNG CP.pdf Gaps: • None found.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2707(a)(b) (NFPA 59A 11.6.6, 11.6.7)	O&M of components was conducted by personnel who met the qualifications and training requirements, including proficiency test, or who were supervised by personnel who met the qualifications and training requirements.	Employment Duration plus 2 years	☒	☐	☐	Procedures: • Operations and Maintenance #193.2707.doc Statement: • Per CMA, Only trained personnel are assigned tasks through the WMS system and for a given task, the individual marks it as complete electronically. Gaps: • None found, procedures and CMA statement above supports this requirement.
193.2707(c)	Corrosion control procedures, including those for the design, installation, operation, and maintenance of cathodic protection systems, were carried out by, or under the direction of, a person qualified by experience and training in corrosion control technology.	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Operations and Maintenance #193.2707.doc Statement: • Per CMA, Only OQ trained personnel are assigned tasks through the WMS system and for a given task, the individual marks it as complete electronically. Gaps: • OQ Training records not retained prior to 2010.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2713(a) (NFPA 59A 11.6.1)	Initial O&M training for operations, maintenance, and supervisory personnel to include: ▪ Characteristics & hazards of LNG and other flammable fluids used at the facility ▪ Potential hazards involved in O&M activities ▪ To carry out the O&M procedures related to assigned duties ▪ Emergency procedures related to assigned duties ▪ First-aid ▪ Facility operations, controls, & functions for operating and supervisory personnel ▪ LNG transfer procedures for operating and supervisory personnel	Employment Duration plus 2 years	☒	☐	☐	Procedures: • Plant Operation and Training.doc Training Documents: • Tests #1 & #2 (Characteristics & hazards of LNG and other flammable fluids used at the facility) • Test #2 (Facility operations, controls, & functions for operating and supervisory personnel) • Test #3 (Emergency procedures related to assigned duties) • Test #5 (LNG transfer procedures for operating and supervisory personnel) • Test #7 (Potential hazards involved in O&M activities & To carry out the O&M procedures related to assigned duties) Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records for two operators are not available. Section 193.2713(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2713(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up operations & maintenance training every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Plant Operation and Training.doc Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Gaps: • Training records are not available prior to 1990 for two employees. In all other cases, training records are present and follow-up training occurs as required every two years (or sooner) for all employees.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2715(a) (NFPA 59A 11.6.1)	Initial security training for personnel responsible for security duties to include: ▪ Recognize breaches of security ▪ Carry out security procedures related to assigned function ▪ Recognize conditions where security assistance is needed ▪ Be familiar with basic plant operations and emergency procedures as needed for assigned duties	Employment Duration plus 2 years	☒ ☒ ☒ ☒	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	Procedures: • Security Training.doc Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Training Documents: • Test #6 (Recognize breaches of security, Carry out security procedures related to assigned function & Recognize conditions where security assistance is needed) • Test #3 (Be familiar with basic plant operations and emergency procedures as needed for assigned duties) Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records for two operators are not available. Section 193.2715(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2715(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up security training every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Security Training.doc Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Gaps: • Training records are not available prior to 1990 for two employees. In all other cases, training records are present and follow-up training occurs as required every two years (or sooner) for all employees.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(a) (NFPA 59A 11.6.1)	Initial fire protection training, including fire drills, for operations, maintenance, and supervisory personnel to include: ▪ Know the potential causes and areas of fire; ▪ Know the types, sizes, and predictable consequences of fire; and ▪ Know and be able to perform their assigned fire control duties and proper use of equipment	Employment Duration plus 2 years	☒ ☒ ☒	☐ ☐ ☐	☐ ☐ ☐	Procedures: • Fire Prevention and Control.doc • Fire Prevention and Control pgs 1-6.doc Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Training Documents: • Test #3 (Know the potential causes and areas of fire, Know the types, sizes, and predictable consequences of fire, & Know and be able to perform their assigned fire control duties and proper use of equipment) Gaps: • Marked satisfactory to signify CMA meets training requirements, however initial training records for two operators are not available. Section 193.2717(b) is marked unsatisfactory to signify records are not available.

Training Records Requirement per 49CFR 193.2719 and NFPA 59A (2001 ed) 11.6.4, 11.6.5						
49CFR Code Paragraph (Other code reference)	**Requirement**	**Min. Retention Period**	**S**	**U**	**N/A**	**Support Documentation**
193.2717(b) (NFPA 59A 11.6.2, 11.6.3)	Follow-up fire protection training, including fire drills, every 2 years	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Fire Prevention and Control.doc • Fire Prevention and Control pgs 1-6.doc Supporting Documentation: • Training binders for each employee are held on-site in Easton and Brockton. Gaps: • Training records are not available prior to 1990 for two employees. In all other cases, training records are present and follow-up training occurs as required every two years (or sooner) for all employees.
193.2717(c)	Plant fire drills provide personnel hands-on experience in carrying out their duties under the fire emergency procedures	Employment Duration plus 2 years	☐	☒	☐	Procedures: • Fire Prevention and Control.doc • Fire Prevention and Control pgs 1-6.doc Gaps: • Fire drills do not appear to be performed in Marshfield.