

Inspection Output (IOR)

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Report Filters

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

Results All

Inspection Information

Inspection Name	McChord CRM 8436	Operator(s)	MCCHORD PIPELINE CO. (31049)	Plan Submitted	06/21/2022
Status	PLANNED	Lead	Darren Tinnerstet	Plan Approval	06/22/2022 by Scott Rukke
Start Year	2022	Team Members	David Cullom	All Activity Start	08/09/2022
System Type	HL	Supervisor	Scott Rukke	All Activity End	11/16/2022
Protocol Set ID	WA.HL.2022.01	Director	Sean Mayo	Inspection Submitted	--
				Inspection Approval	--

Inspection Summary

Inspection Scope and Summary

Control Room Management inspection of McChord Pipeline Company.

WUTC inspector David Cullom assisted with the remote record / procedure review and HQ / Control room site visit.

The McChord Pipeline is a buried intrastate pipeline 14.25 miles in length, constructed in 1966 with 6-inch nominal steel pipe grade B, wall thickness of 0.188 inch to 0.432 inch. A one mile reroute was performed in 1996. The pipeline has a 720 psig MOP (36% SMYS) with a normal operating pressure at 450 psig (21% SMYS). The pipeline is divided into four sections with isolation valves between each section. The entire pipeline has about 400 foot elevation differential. The pipeline transports jet fuel from US Oil Refinery located in Tacoma near Commencement Bay to the McChord Air Base storage facility. Jurisdiction begins at the pump suction valves (P-1401) and ends at the custody transfer manifold valves downstream of the meters at McChord Air Force Base. The pipeline was hydrostatically tested in 1996, inline inspected in 2004 (GE pig), and MFL runs were completed in 2009, 2014 and 2019. Prior to each run they evaluate the tool to make sure complementary technologies are used. Tuboscope was used in 1996. GE used UT in 2004. In 2005, there was a pressure cycle analysis done by Kiefner and Assoc. along with the LF Pre-70 ERW study. In 2009, a MFL pig was run by Baker Hughes

McChords integrity management program considers all of its pipeline to be in a HCA or a HCA CA given it's location and proximity to HPAs, CNWs, ecological and drinking water USAs.

LF Pre-70 ERW mileage is at 13.25. The remaining 1 mile is not LF Pre-70 ERW.

Facilities visited and Total AFOD

McChord Pipeline administrative offices and pipeline control room located at processing plant.

Remote record / procedure review days - 2

HQ / Control Room field days - 3

Total AFOD = 5

Summary of Significant Findings

(DO NOT Discuss Enforcement options)

No Violations or areas of concern.

Primary Operator contacts and/or participants

Joel Roppo - Chief Engineer

Operator executive contact and mailing address for any official correspondence

Andrew Troske - Vice President
McChord Pipeline Company
3001 Marshall Ave.
Tacoma, WA 98421

Scope (Assets)

Short # Name	Long Name	Asset Type	Asset IDs	Excluded Topics	Planned	Required	Total Inspected	Required % Complete
1. 88980 (72)	McChord Pipeline Company	unit	88980	Offshore GOM Reg Rural Gather Rural Low Stress	148	148	148	100.0%

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

Plans

Plan # Assets	Focus Directives	Involved Groups/Subgroups	Qst Type(s)	Extent Notes
1. 88980 (72)	Control Room Management	AR, CR, DC, TDC, EP, FS, IM, MO, PD, RPT, SRN, TD, TQ, 114, GENERIC	P, R, O, S	Detail --

Plan Implementations

Activity # Name	SMART Act#	Start Date End Date	Focus Directives	Involved Groups/Subgroups	Assets	Qst Type(s)	Planned	Required	Total Inspected	Required % Complete
1. McChord CRM --	--	08/09/2022 -- 11/16/2022	--	all planned questions	all assets	all types	148	148	148	100.0%

- 1. Since questions may be implemented in multiple activities, but answered only once, questions may be represented more than once in this table.
- 2. Percent completion excludes unanswered questions planned as "always observe".

Forms

No.	Entity	Form Name	Status	Date Completed	Activity Name	Asset
1.	Attendance List	McChord CRM	COMPLETED	10/05/2022	McChord CRM	--

Results (all values, 148 results)

CR.CRMGEN: General

- 1. Question Result, ID, References Sat, CR.CRMGEN.CRMCRITERIA.P, 195.446(a)

Question Text *Do procedures adequately address the process and criteria to determine which facilities are control rooms?*

Assets Covered 88980 (72)

Result Notes Maint. Manual Section D-17 (1.1) - Policy

Control room for plant has been in operation since the 1960's.

2. Question Result, ID, References Sat, CR.CRMGEN.CRMMGMT.P, 195.446(a)

Question Text *Are CRM procedures formalized and controlled?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section A-3 Change Management, Section 3 Affected Personnel.

PSM Manual, Section 8

Disclaimer on front of Ops Manual states when revised old versions are to be destroyed.

Electronic versions are replaced on the internal intranet and controllers do not have access to historical procedures or manuals.

3. Question Result, ID, References Sat, CR.CRMGEN.CRMIMPLEMENT.R, 195.446(a)

Question Text *Were procedures approved, in place, and implemented on or before the regulatory deadline?*

Assets Covered 88980 (72)

Result Notes Administrative Manual was originally issued in 10/2001.

4. Question Result, ID, References Sat, CR.CRMGEN.CRMPROCLOCATION.O, 195.446(a)

Question Text *Are procedures readily available to controllers in the control room?*

Assets Covered 88980 (72)

Result Notes Current procedure manuals are available in hardcopy at the controllers station.

CR.CRMRR: Roles and Responsibilities

5. Question Result, ID, References Sat, CR.CRMRR.RESPONSIBLE.P, 195.446(b)(1)

Question Text *Are there clear processes to describe each controller's physical domain of responsibility for pipelines and other facility assets?*

Assets Covered 88980 (72)

Result Notes Ops Manual Section II(1)

6. Question Result, ID, References Sat, CR.CRMRR.QUALCONTROL.P, 195.446(b)(1)

Question Text *Are there provisions in place to assure that only qualified individuals may assume control at any console/desk?*

Assets Covered 88980 (72)

Result Notes Ops Manual Section II(1)

OQ Task 40

"A Reformer" is only Controller who can operate the pipeline.

7. Question Result, ID, References NA, CR.CRMRR.DOMAINCHANGE.P, 195.446(b)(1)

Question Text *If the physical domain of responsibility periodically changes, has a clear process been established to describe the conditions for when such a change occurs?*

Assets Covered 88980 (72)

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

No such relevant facilities/equipment existed in the scope of inspection review.

Operator does not have another location or secondary control room.

8. Question Result, ID, References Sat, CR.CRMRR.RESPCHANGE.P, 195.446(b)(1)

Question Text *Do processes address a controller's role during temporary impromptu (unplanned) changes in controller responsibilities?*

Assets Covered 88980 (72)

Result Notes Operations Manual Procedure 14-30(1)(c)

9. Question Result, ID, References Sat, CR.CRMRR.COMMANDVERIFY.P, 195.446(b)(1)

Question Text *Do the defined roles and responsibilities require controllers to stay at the console to verify all SCADA commands that have been initiated are fulfilled, and that commands given via verbal communications are acknowledged before leaving the console for any reason?*

Assets Covered 88980 (72)

Result Notes Operations Manual Procedure 14-30(1)(c)

10. Question Result, ID, References Sat, CR.CRMRR.AUTHORITYABNORMAL.P, 195.446(b)(2)

Question Text *Have processes been established to define the controllers' authority and responsibilities when an abnormal operating condition is detected?*

Assets Covered 88980 (72)

Result Notes Ops Manual Section IV - Abnormal Operations

11. Question Result, ID, References Sat, CR.CRMRR.PRESSLIMITS.O, 195.446(b)(2)

Question Text *Are controllers aware of the current MOPs of all pipeline segments for which they are responsible, and have they been assigned the responsibility to maintain those pipelines at or below the MOP?*

Assets Covered 88980 (72)

Result Notes Confirmed that MOP is 720 psig.

Typical pressure during transfer is 420 psig.

12. Question Result, ID, References Sat, CR.CRMRR.AUTHORITYEMERGENCY.P, 195.446(b)(3) (NTSB P-11-9)

Question Text *Do processes define the controllers' authority and responsibility to make decisions, take actions, and communicate with others upon being notified of, or upon detection of, and during, an emergency or if a leak or rupture is suspected?*

Assets Covered 88980 (72)

Result Notes Ops Manual Section IV - Abnormal Operations

13. Question Result, ID, References Sat, CR.CRMRR.EVACUATION.P, 195.446(b)(3)

Question Text *Do processes specifically address the controller's responsibilities in the event the control room must be evacuated?*

Assets Covered 88980 (72)

Result Notes Ops Manual Section II(4.5)

Emergency Refinery Shutdown (REFMR-EMP-003) - Step #10 for emergency evacuation.

14. Question Result, ID, References Sat, CR.CRMRR.COMMSYSFAIL.P, 195.446(b)(3)

Question Text *Do processes specifically address the controller's responsibilities in the event of a SCADA system or data communications system failure impacting large sections of the controller's domain of responsibility?*

Assets Covered 88980 (72)

Result Notes Ops manual Section IV (6.0) - Abnormal Operations (Other Plant Problems)

15. Question Result, ID, References **Sat, CR.CRMRR.HANDOVER.P, 195.446(b)(4) (195.446(c)(5))**
 Question Text *Have processes been established for the hand-over of responsibility that specify the type of information to be communicated to the oncoming shift?*
 Assets Covered **88980 (72)**
 Result Notes **McChord Ops Manual Section II(6) - Shift turnover procedure**

Need to update time of shift handover from 0700-1900 and 1900-0700 to 0600 to 1800 and 1800 to 0600.
16. Question Result, ID, References **Sat, CR.CRMRR.HANDOVER.O, 195.446(b)(4) (195.446(c)(5))**
 Question Text *Do observations indicate adequate hand-over of responsibility to the oncoming shift?*
 Assets Covered **88980 (72)**
 Result Notes **observed shift hand-over between A Reformer Operators Roger Wilkey and Bill Burkart. Briefing included required information to update oncoming controller.**
17. Question Result, ID, References **Sat, CR.CRMRR.HANDOVERDOC.P, 195.446(b)(4) (195.446(c)(5))**
 Question Text *Do processes require that records document the hand-over of responsibility, document the time the actual hand-over of responsibility occurs, and the key information and topics that were communicated during the hand-over?*
 Assets Covered **88980 (72)**
 Result Notes **McChord Ops Manual Section II(6) - Shift turnover procedure**
18. Question Result, ID, References **Sat, CR.CRMRR.HANDOVERDOC.R, 195.446(b)(4) (195.446(c)(5))**
 Question Text *Are there records that document the hand-over of responsibility, document the time the actual hand-over of responsibility occurs, and the key information and topics that were communicated during the hand-over?*
 Assets Covered **88980 (72)**
 Result Notes **Reviewed "A Reformer" Logbooks for 2019-2021 audit periods.**

No issues identified. Excellent handwritten notes are kept by controllers.
19. Question Result, ID, References **Sat, CR.CRMRR.HANDOVEROVERLAP.P, 195.446(b)(4)**
 Question Text *Do processes require the controllers to discuss recent and impending important activities ensuring adequate overlap?*
 Assets Covered **88980 (72)**
 Result Notes **McChord Ops Manual Section II(6) - Shift turnover procedure**
20. Question Result, ID, References **Sat, CR.CRMRR.HANDOVERALTERNATIVE.P, 195.446(b)(4)**
 Question Text *When a controller is unable to continue or assume responsibility for any reason, do the shift hand-over processes include alternative shift hand-over actions that specifically address this situation?*
 Assets Covered **88980 (72)**
 Result Notes **Ops Manual Section II(6) - Shift turnover procedure.**

Shift Supervisor is responsible for finding replacement coverage.
21. Question Result, ID, References **Sat, CR.CRMRR.UNATTENDCONSOLE.P, 195.446(b)(4)**
 Question Text *Has the operator established an adequate process for occasions when the console is left temporarily unattended for any reason?*
 Assets Covered **88980 (72)**
 Result Notes **Ops Manual Section II(6) - Shift turnover procedure.**

Shift change over is to be conducted face to face at the controller station. At no time is console to be left unattended.

22. Question Result, ID, References **Sat, CR.CRMRR.CONSOLECOVERAGE.P, 195.446(b)(4)**
 Question Text *Do processes maintain adequate console coverage during shift hand-over?*
 Assets Covered **88980 (72)**
 Result Notes **McChord Ops Manual Section II(6) - Shift turnover procedure**
- Per procedure, shift turnover is to take place at the console so at no time is the console left unattended.
23. Question Result, ID, References **NA, CR.CRMRR.OTHERAUTHORITYDISALLOW.P, 195.446(b)(5)**
 Question Text *Do processes disallow others to have authority to direct or supersede the specific technical actions of a controller?*
 Assets Covered **88980 (72)**
 Result Notes **OPS Manual Section II (1.6)**
- Shift Supervisor, Operations Superintendent, and Operations Manager have the authority to direct and/or supersede the technical actions of the "A" Reformer operator or PG East.
24. Question Result, ID, References **NA, CR.CRMRR.OTHERAUTHORITYDISALLOW.R, 195.446(b)(5)**
 Question Text *Do records indicate that the policy disallowing others to have authority to direct or supersede the specific technical actions of a controller has been communicated to controllers and others?*
 Assets Covered **88980 (72)**
 Result Notes **No such requirement existed in the scope of inspection review.**
25. Question Result, ID, References **NA, CR.CRMRR.OTHERAUTHORITYDISALLOW.O, 195.446(b)(5)**
 Question Text *Are controllers aware of, and can reference, processes that disallow others to have authority to direct or supersede the specific technical actions of a controller?*
 Assets Covered **88980 (72)**
 Result Notes **No such requirement existed in the scope of inspection review.**
26. Question Result, ID, References **Sat, CR.CRMRR.OTHERAUTHORITYQUAL.P, 195.446(b)(5)**
 Question Text *Does the process result in identification of required qualification elements for those authorized to direct or supersede the technical actions of a controller that are sufficient for those individuals to understand the implications of the scope of potential actions?*
 Assets Covered **88980 (72)**
 Result Notes **Operations Manual Section II (1.6)**
- Operator chose to remove and disallow others to direct or supersede the technical actions of controllers. This action has never occurred and it was discussed about needing to either update and expand the procedure for allowing it or remove the procedure altogether. Operator decided that since it has never occurred and would most likely never occur that they would remove the ability for authorized personnel to supersede controller actions.
- Reviewed redline changes that are in the workflow for updating CRM manual. Currently in change management protocol and new updated manual will be sent to UTC by the end of 2022 calendar year.
27. Question Result, ID, References **NA, CR.CRMRR.OTHERAUTHORITYQUAL.R, 195.446(b)(5)**
 Question Text *Do records indicate that others given authority to direct or supersede the specific technical actions of a controller were qualified?*
 Assets Covered **88980 (72)**
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**
- No OQ records for shift supervisors, or others with responsibility to supersede controller actions.
28. Question Result, ID, References **NA, CR.CRMRR.OTHERAUTHORITYIMPLEMENT.P, 195.446(b)(5)**

Question Text *Is the process defined with respect to the details of how those authorized to direct or supersede the technical actions of a controller are to implement their authority?*

Assets Covered 88980 (72)

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

29. Question Result, ID, References Sat, CR.CRMRR.OTHERAUTHORITYLIST.R, 195.446(b)(5)

Question Text *Is a list of individuals with authority to direct or supersede the technical actions of a controller readily available to controllers?*

Assets Covered 88980 (72)

Result Notes OPS Manual Section II (1.6) - describes the three authorized personnel who can supersede controller (Shift Supervisor, Operations Superintendent, Operations Manager)

Manual is readily available to controllers.

This authority is being removed and will no longer be in procedure.

30. Question Result, ID, References NA, CR.CRMRR.OTHERAUTHORITYIMPLEMENT.R, 195.446(b)(5)

Question Text *Do records adequately document occurrences of when others authorized to direct or supersede the technical actions of a controller have done so?*

Assets Covered 88980 (72)

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

31. Question Result, ID, References NA, CR.CRMRR.OTHERAUTHORITYIMPLEMENT.O, 195.446(b)(5)

Question Text *Do others authorized to direct or supersede the technical actions of a controller demonstrate an understanding of the process to implement this authority?*

Assets Covered 88980 (72)

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

CR.SCADA: Supervisory Control and Data Acquisition

32. Question Result, ID, References Sat, CR.SCADA.SYSTEMMOC.P, 195.446(c)(1)

Question Text *Do processes clearly define the types of changes to the SCADA system(s) that constitute additions, expansions, or replacements under the meaning of the CRM rule?*

Assets Covered 88980 (72)

Result Notes Maint. Manual Section D-18 (1.2)

33. Question Result, ID, References Sat, CR.SCADA.DISPLAYCONFIG.P, 195.446(c)(1)

Question Text *Are there written processes to implement the API RP 1165 display standards to the SCADA systems that have been added, expanded, or replaced since August 1, 2012?*

Assets Covered 88980 (72)

Result Notes Maint. Manual Section D-18 (1.2)

Maint. Manual Section D-17 (1.3)

34. Question Result, ID, References NA, CR.SCADA.1165HUMANFACTORS.O, 195.446(c)(1)

Question Text *Has section 4 of API RP 1165 regarding human factors engineering been implemented?*

Assets Covered 88980 (72)

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

35. Question Result, ID, References NA, CR.SCADA.DISPLAYHARDWARE.R, 195.446(c)(1)

Question Text *Has section 5 of API RP 1165 regarding display hardware been implemented?*

Assets Covered 88980 (72)

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

36. Question Result, ID, References NA, CR.SCADA.DISPLAYLAYOUT.R, 195.446(c)(1)
Question Text *Has section 6 of API RP 1165 regarding display layout and organization been implemented?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review

37. Question Result, ID, References NA, CR.SCADA.DISPLAYNAVIGATION.R, 195.446(c)(1)
Question Text *Has section 7 of API RP 1165 regarding display navigation been implemented?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

38. Question Result, ID, References NA, CR.SCADA.DISPLAYOBJECTS.O, 195.446(c)(1)
Question Text *Has section 8 of API RP 1165 regarding display object characteristics been implemented?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

39. Question Result, ID, References NA, CR.SCADA.DISPLAYDYNAMICS.R, 195.446(c)(1)
Question Text *Has section 9 of API RP 1165 regarding display object dynamics been implemented?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

40. Question Result, ID, References NA, CR.SCADA.CONTROLSELECTION.R, 195.446(c)(1)
Question Text *Has section 10 of API RP 1165 control selection and techniques been implemented?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

41. Question Result, ID, References NA, CR.SCADA.ADMINISTRATION.R, 195.446(c)(1)
Question Text *Has section 11 of API RP 1165 administration been implemented?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

42. Question Result, ID, References NA, CR.SCADA.1165IMPRACTICAL.R, 195.446(c)(1)
Question Text *If any/all applicable paragraph(s) of API RP 1165 have not been implemented, has it been demonstrated and documented that the unimplemented provisions are impractical for the SCADA system used?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

43. Question Result, ID, References Sat, CR.SCADA.SETPOINT.P, 195.446(c)(2) (195.406(b))
Question Text *Does the process adequately define safety-related points?*
Assets Covered 88980 (72)
Result Notes Maint. Manual Section D-18 (2.2) - states all Net 90 data points are considered safety related.

Ops Manual Appendix 3

44. Question Result, ID, References Sat, CR.SCADA.SETPOINT.R, 195.446(c)(2)
Question Text *Do records indicate safety-related points have been adequately implemented?*
Assets Covered 88980 (72)

Result Notes Reviewed PM List for safety related points that are tested and verified. Recently changed from Maximo to SAP.

45. Question Result, ID, References Sat, CR.SCADA.POINTVERIFY.P, 195.446(c)(2)

Question Text *Are there adequate processes to define and identify the circumstances which require a point-to-point verification?*

Assets Covered 88980 (72)

Result Notes Maint. Manual Section D-18(2.2) - first paragraph.

All point-to-point verification will be conducted for all safety-related points in SCADA system. See Comprehensive Scheduling chart in Section D-1.

46. Question Result, ID, References Sat, CR.SCADA.POINTVERIFY.R, 195.446(c)(2)

Question Text *Have required point-to-point verifications been performed?*

Assets Covered 88980 (72)

Result Notes Reviewed records for point-to-point verifications completed during 2019-2021 audit period for the following points:

CPM Leak Detection (PM1670)

Temp Transmitter (PM0965)

Meter Calibrations (PM0969)

Meter Calibrations Base (PM0976)

High Level Tank (PM1058)

Calibrate Pressure Transmitter (PM1559)

47. Question Result, ID, References Sat, CR.SCADA.POINTVERIFYEXTENT.P, 195.446(c)(2)

Question Text *Are there adequate processes for the thoroughness of the point-to-point verification?*

Assets Covered 88980 (72)

Result Notes Maint. Manual Section D-18(2.2)

48. Question Result, ID, References Sat, CR.SCADA.POINTVERIFYEXTENT.R, 195.446(c)(2)

Question Text *Do records demonstrate adequate thoroughness of the point-to-point verification?*

Assets Covered 88980 (72)

Result Notes Reviewed completed work orders for point-to-point verifications completed during 2019-2021:

CPM Leak Detection (PM1670)

Temp Transmitter (PM0965)

Meter Calibrations (PM0969)

Meter Calibrations Base (PM0976)

High Level Tank (PM1058)

Calibrate Pressure Transmitter (PM1559)

2021 WO are located in SAP system.

49. Question Result, ID, References **Sat, CR.SCADA.POINTVERFIYINTVL.P, 195.446(c)(2)**
Question Text *Is there an adequate process for defining when the point-to-point verification must be completed?*
Assets Covered **88980 (72)**
Result Notes **Maint. Manual Section D-1: Comprehensive Scheduling Chart**
50. Question Result, ID, References **Sat, CR.SCADA.POINTVERFIYINTVL.R, 195.446(c)(2)**
Question Text *Do records indicate the point-to-point verification has been completed at the required intervals?*
Assets Covered **88980 (72)**
Result Notes **Reviewed records for point-to-point verifications completed during 2019-2021 audit period for the following points:**

CPM Leak Detection (PM1670)

Temp Transmitter (PM0965)

Meter Calibrations (PM0969)

Meter Calibrations Base (PM0976)

High Level Tank (PM1058)

Calibrate Pressure Transmitter (PM1559)
51. Question Result, ID, References **NA, CR.SCADA.POINTVERIFY.O, 195.446(c)(2)**
Question Text *Are point-to-point verifications performed adequately when required?*
Assets Covered **88980 (72)**
Result Notes **No such activity/condition was observed during the inspection.**
52. Question Result, ID, References **Sat, CR.SCADA.COMMPLAN.P, 195.446(c)(3)**
Question Text *Has an internal communication plan been established and implemented that is adequate to manually operate the pipeline during a SCADA failure/outage?*
Assets Covered **88980 (72)**
Result Notes **Ops Manual Section IV (6) - Loss of SCADA would be considered an emergency and transfer would be shut down immediately.**
53. Question Result, ID, References **Sat, CR.SCADA.COMMPLAN.R, 195.446(c)(3)**
Question Text *Has the internal communication plan been tested and verified for manual operation of the pipeline safely at least once each calendar year but at intervals not exceeding 15 months?*
Assets Covered **88980 (72)**
Result Notes **Reviewed yearly test records fir 2019-2021.**

DHS is driving McChord to be able to operate the pipeline manually in event of a cyberattack.

See 2/2/2022 memo included in Ops Manual (Page 71) detailing procedure. This procedure has not been field tested or implemented.
54. Question Result, ID, References **Sat, CR.SCADA.BACKUPSCADA.O, 195.446(c)(4)**
Question Text *Is there a backup SCADA system?*
Assets Covered **88980 (72)**
Result Notes **McChord has a redundant server to back-up their SCADA system.**

55. Question Result, ID, References **NA, CR.SCADA.BACKUPSCADADEV.P, 195.446(c)(4)**
 Question Text *Has the use of the backup SCADA system for development work been defined?*
 Assets Covered **88980 (72)**
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**
- McChord has three redundant servers running in parallel to provide SCADA control. If one fails, there is automatic fail-over to the other two servers. There is no action by the Operators. No development is done on any of the servers.
56. Question Result, ID, References **Sat, CR.SCADA.BACKUPSCADATEST.R, 195.446(c)(4)**
 Question Text *Is the backup SCADA system tested at least once each calendar year at intervals not to exceed 15 months?*
 Assets Covered **88980 (72)**
 Result Notes **The redundant servers are rebooted monthly by Maintenance to test the fail-over function.**
- Reviewed test records for PM1575.
57. Question Result, ID, References **NA, CR.SCADA.BACKUPSCADAVERIFY.R, 195.446(c)(4)**
 Question Text *Does the testing verify that there are adequate processes in place for decision-making and internal communications to successfully implement a transition from primary SCADA to backup SCADA, and back to primary SCADA?*
 Assets Covered **88980 (72)**
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**
- McChord has three redundant servers running in parallel (clones) to provide SCADA control. If one fails, there is automatic fail-over to the other two servers. There is no action by the Operators.
58. Question Result, ID, References **NA, CR.SCADA.BACKUPSCADADEQUACY.R, 195.446(c)(4)**
 Question Text *If the back-up SCADA system is not designed to handle all the functionality of the main SCADA system, does the testing determine whether there are adequate procedures in place to account for displaced and/or different available functions during back-up operations?*
 Assets Covered **88980 (72)**
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**
- McChord has three redundant servers running in parallel (clones) to provide SCADA control. If one fails, there is automatic fail-over to the other two servers. There is no action by the Operators.
59. Question Result, ID, References **NA, CR.SCADA.BACKUPSCADATRANSFER.P, 195.446(c)(4)**
 Question Text *Do processes adequately address and test the logistics of transferring control to a backup control room?*
 Assets Covered **88980 (72)**
 Result Notes **No such relevant facilities/equipment existed in the scope of inspection review.**
60. Question Result, ID, References **NA, CR.SCADA.BACKUPSCADARETURN.P, 195.446(c)(4)**
 Question Text *Do procedures adequately address and test the logistics of returning operations back to the primary control room?*
 Assets Covered **88980 (72)**
 Result Notes **No such event occurred, or condition existed, in the scope of inspection review.**
- McChord has three redundant servers running in parallel to provide SCADA control. If one fails, there is automatic fail-over to the other two servers. There is no action by the Operators.
61. Question Result, ID, References **NA, CR.SCADA.BACKUPSCADAFUNCTIONS.R, 195.446(c)(4)**
 Question Text *Is a representative sampling of critical functions in the back-up SCADA system being tested to ensure proper operation in the event the backup system is needed?*
 Assets Covered **88980 (72)**

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

There is not a separate "backup SCADA" system; each of the three redundant servers is capable of handling all functionality, so as long as one server is operating all functions are available.

CR.CRMFM: Fatigue Management

62. Question Result, ID, References Sat, CR.CRMFM.FATIGUEMITIGATION.P, 195.446(d)

Question Text *Does the fatigue mitigation process or procedures (plan) identify operator-specific fatigue risks?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-2 (3) - Training

63. Question Result, ID, References Sat, CR.CRMFM.FATIGUERISKS.P, 195.446(d)

Question Text *Does the fatigue mitigation plan adequately address how the program reduces the risk associated with controller fatigue?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-2 - Fatigue Mitigation Program

Operator utilizes API 755 standard and shift length and rotations for countermeasures

Control room also utilizes exercise equipment and has a fully stocked kitchen located onsite.

64. Question Result, ID, References Sat, CR.CRMFM.FATIGUEQUANTIFY.P, 195.446(d)

Question Text *Do processes require that the potential contribution of controller fatigue to incidents and accidents be quantified during investigations?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-4

65. Question Result, ID, References Sat, CR.CRMFM.FATIGUEMANAGER.P, 195.446(d)

Question Text *Is there a designated fatigue risk manager who is responsible and accountable for managing fatigue risk and fatigue countermeasures, and someone (perhaps the same person) that is authorized to review and approve HOS emergency deviations?*

Assets Covered 88980 (72)

Result Notes McChord does not have a designated Fatigue Risk manager. Deviations in HOS must be approved by Operations Manager or Maintenance Manager.

Admin Manual Section A-2(2.2) - Deviations must be approved by Operations Manager or Maintenance Manager.

66. Question Result, ID, References Sat, CR.CRMFM.SHIFTLENGTH.R, 195.446(d)(1)

Question Text *Is the scheduled shift length less than or equal to 12 hours (not including shift hand-over) or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?*

Assets Covered 88980 (72)

Result Notes Reviewed random selection of weekly schedules for 2019-2021 period. No shifts were scheduled for over 12 hour periods

67. Question Result, ID, References Sat, CR.CRMFM.SHIFTLENGTHTIME.R, 195.446(d)(1)

Question Text *Does the operator factor in all time the individual is working for the company when establishing shift lengths and schedule rotations or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?*

Assets Covered 88980 (72)

Result Notes Reviewed random selection of weekly schedules for 2019-2021 period.

68. Question Result, ID, References Sat, CR.CRMFM.SCHEDULETIMEOFF.R, 195.446(d)(1)

Question Text *Are all scheduled periods of time off at least one hour longer than 8 hours plus commute time or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?*

Assets Covered 88980 (72)

Result Notes Reviewed random selection of weekly schedules for 2019-2021 period.

Operator utilizes the DuPont schedule.

69. Question Result, ID, References NA, CR.CRMFM.ONCALLCONTROLLER.P, 195.446(d)

Question Text *For controllers who are on call, do processes minimize interrupting the required 8 hours of continuous sleep or require a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?*

Assets Covered 88980 (72)

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

Operator does not have on-call controllers.

70. Question Result, ID, References NA, CR.CRMFM.ONCALLCONTROLLER.R, 195.446(d)(1)

Question Text *For controllers who are on call, does the operator minimize interrupting the required 8 hours of continuous sleep or is there a documented technical basis to show that shift lengths and schedule rotations are adequate to provide controllers off-duty time sufficient to achieve 8 hours of continuous sleep?*

Assets Covered 88980 (72)

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

Operator does not have on-call controllers.

71. Question Result, ID, References Sat, CR.CRMFM.MAXHOS.P, 195.446(d)(4)

Question Text *Do processes limit the maximum HOS limit in any sliding 7-day period to no more than 65 hours or is there a documented technical basis to show reduction of the risk associated with controller fatigue?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section A-2 (2.1) - Shift Lengths and Rotations.

Operator utilizes the DuPont schedule.

72. Question Result, ID, References Sat, CR.CRMFM.MINTIMEOFF.P, 195.446(d)(4)

Question Text *After reaching the HOS limit in any sliding 7-day period, is the minimum time off at least 35 hours or is there a documented technical basis to show a reduction of the risk associated with controller fatigue?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section A-2 (2.1) - Shift Lengths and Rotations.

Operator utilizes the DuPont schedule.

73. Question Result, ID, References Sat, CR.CRMFM.DOCSCCHEDULE.P, 195.446(d)(4)

Question Text *Is there a formal system to document all scheduled and unscheduled HOS worked, including overtime and time spent performing duties other than control room duties?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section A-2 (2.3) - Shift Lengths and Rotations.

Operator utilizes DuPont system.

74. Question Result, ID, References NA, CR.CRMFM.DAYSOFF.P, 195.446(d)(4)

Question Text *For normal business hour type operations (i.e., five days per week), are no more than five days worked in succession before at least two days off?*

Assets Covered 88980 (72)

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

75. Question Result, ID, References NA, CR.CRMFM.WORKHOURS.R, 195.446(d)(4)

Question Text *For normal business hour type operations (i.e., five days per week), do records indicate shift start times no earlier than 6:00 a.m. and shift end times no later than 7:00 p.m.?*

Assets Covered 88980 (72)

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

76. Question Result, ID, References Sat, CR.CRMFM.FATIGUECOUNTERMEASURES.P, 195.446(d)(4)

Question Text *For shifts longer than 8 hours, have specific fatigue countermeasures been implemented for the ninth and beyond hours?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-2

77. Question Result, ID, References Sat, CR.CRMFM.DAILYHOSLIMIT.P, 195.446(d)(4)

Question Text *Do processes limit the daily maximum HOS limit to no more than 14 hours in any sliding 24-hour period?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-2 (2)

Operator utilizes DuPont schedule.

78. Question Result, ID, References Sat, CR.CRMFM.CONTROLLERNUMBERS.O, 195.446(d)(4)

Question Text *Do operations include a sufficient number of qualified controllers?*

Assets Covered 88980 (72)

79. Question Result, ID, References Sat, CR.CRMFM.OFFDUTYHOURS.P, 195.446(d)(4)

Question Text *Do processes ensure that controllers are provided with at least thirty-five (35) continuous off-duty hours when limits are reached following the most recent 35-hour (minimum) off-duty rest period or is there a documented technical basis to show that the maximum limit on controller HOS is adequate to reduce the risk associated with controller fatigue?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-2 (2.1)

Operator utilizes the DuPont schedule.

80. Question Result, ID, References Sat, CR.CRMFM.SHIFTHOLDOVER.P, 195.446(d)(4)

Question Text *Does the shift holdover process conform to shift holdover guidelines or is there a documented technical basis to show that the maximum limit on controller HOS is adequate to reduce the risk associated with controller fatigue?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-2 (2.2)

Operator utilizes the DuPont schedule.

81. Question Result, ID, References Sat, CR.CRMFM.SPECIFICCOUNTERMEASURES.P, 195.446(d)(4)

Question Text *Do processes require specific fatigue countermeasures during applicable time periods, or is there a documented technical basis to show that the maximum limit on controller HOS is adequate to reduce the risk associated with controller fatigue?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-2 (2) - Shift Length and rotations.

McChord utilizes the DuPont schedule (DDDONNN) which is a industry based scheduling format that was developed on scientific principles.

82. Question Result, ID, References Sat, CR.CRMFM.HOSDEVIATIONS.P, 195.446(d)(4)
Question Text *Is there a formal process for approving deviations from the maximum HOS limits?*
Assets Covered 88980 (72)
Result Notes Admin Manual, Section A-2 (2.2) - Shift Lengths and Rotations.

Any deviations have to be approved by Operations Manager or Maintenance Manager.
83. Question Result, ID, References Sat, CR.CRMFM.FATIGUEEDUCATE.P, 195.446(d)(2) (195.446(d)(3))
Question Text *Does the program require that fatigue education/training is required for all controllers and control room supervisors?*
Assets Covered 88980 (72)
Result Notes Admin Manual Section A-2 (3.0) - Training.
84. Question Result, ID, References Sat, CR.CRMFM.FATIGUEEDUCATE.R, 195.446(d)(2) (195.446(d)(3))
Question Text *Is periodic fatigue education/training documented for all controllers and control room supervisors?*
Assets Covered 88980 (72)
Result Notes Reviewed training records for 2019-2021.
85. Question Result, ID, References Sat, CR.CRMFM.FATIGUEREVIEW.P, 195.446(d)(2) (195.446(d)(3), 195.402(a))
Question Text *Do processes require that the effectiveness of the fatigue education/training program be reviewed at least once each calendar year, not to exceed 15 months?*
Assets Covered 88980 (72)
Result Notes Admin Manual Section A-2 (1.0) - Policy
86. Question Result, ID, References Sat, CR.CRMFM.FATIGUESTATEGY.P, 195.446(d)(2)
Question Text *Does fatigue education address fatigue mitigation strategies (countermeasures)?*
Assets Covered 88980 (72)
Result Notes Admin Manual Section A-2 (3) - Training
87. Question Result, ID, References Sat, CR.CRMFM.OFFDUTY.P, 195.446(d)(2)
Question Text *Does fatigue education address how off-duty activities contribute to fatigue?*
Assets Covered 88980 (72)
Result Notes Admin Manual Section A-2 (3) - Training
88. Question Result, ID, References Sat, CR.CRMFM.FATIGUECONTENT.P, 195.446(d)(3)
Question Text *Is the content of fatigue training adequate for training controllers and supervisors to recognize the effects of fatigue?*
Assets Covered 88980 (72)
Result Notes Admin Manual Section A-2 (3) - Training
89. Question Result, ID, References Sat, CR.CRMFM.FATIGUECONTENT.R, 195.446(d)(3)
Question Text *Has controller and supervisor training to recognize the effects of fatigue been documented?*
Assets Covered 88980 (72)
Result Notes Reviewed 2021 Fatigue Training presentation.

CR.CRMAM: Alarm Management

90. Question Result, ID, References Sat, CR.CRMAM.ALARM.P, 195.446(e)

Question Text *Is the alarm management plan a formal process that specifically identifies critical topical areas included in the program?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-5 - Alarm Management

91. Question Result, ID, References Sat, CR.CRMAM.ALARMMALFUNCTION.P, 195.446(e)(1)

Question Text *Is there a process to identify and correct inaccurate or malfunctioning alarms?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-5 (5) - Alarm Testing, Maintenance and Performance. Instrument shop generates monthly report that identifies all suppressed and inhibited alarms. False alarms are to be reported immediately to shift supervisor. All deficiencies identified will be addressed in a timely manner.

92. Question Result, ID, References Sat, CR.CRMAM.ALARMREVIEW.P, 195.446(e)(1)

Question Text *Does the review of safety-related alarms account for different alarm designs and all alarm types/priorities?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-5 (2.3) - Alarm Prioritization

93. Question Result, ID, References NA, CR.CRMAM.CONTROLLERPERFORMANCE.P, 195.446(h) (195.446(e)(1))

Question Text *Does the review of safety-related alarms account for console differences that could affect individual-specific controller qualification and performance?*

Assets Covered 88980 (72)

Result Notes No such relevant facilities/equipment existed in the scope of inspection review.

94. Question Result, ID, References Sat, CR.CRMAM.STALEDATA.P, 195.446(e)(1)

Question Text *Does the review of safety-related alarms include specific procedures and practices for managing stale or unreliable data?*

Assets Covered 88980 (72)

Result Notes Maintenance Manual Section D-18.

95. Question Result, ID, References Sat, CR.CRMAM.MONTHLYANALYSIS.P, 195.446(e)(2)

Question Text *Do processes require the monthly identification, recording, review, and analysis of points that have been taken off scan, have had alarms inhibited, generated false alarms, or that have had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section 5 (5.1) - Alarm Testing, Maintenance and Performance

Monthly report generated identifies all suppressed and inhibited alarms.

96. Question Result, ID, References Sat, CR.CRMAM.PROBLEMCORRECTION.P, 195.446(e)(2)

Question Text *Does the alarm management plan include a process for promptly correcting identified problems and for returning these points to service?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section 5 (5.8) - Alarm Testing, Maintenance and Performance

97. Question Result, ID, References Sat, CR.CRMAM.ALARMVERIFY.R, 195.446(e)(2)

Question Text *Do records verify that monthly reviews and analysis of alarm points have been performed?*

Assets Covered 88980 (72)

Result Notes Reviewed suppressed alarm logs for 2019-2021 audit period.

98. Question Result, ID, References Sat, CR.CRMAM.ALARMSETPOINTS.P, 195.446(e)(3)

Question Text *Is there a formal process to determine the correct alarm setpoint values and alarm descriptions?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section 5 (5.5) - Alarm Testing, Maintenance and Performance

99. Question Result, ID, References Sat, CR.CRMAM.SETTINGCONTROL.P, 195.446(e)(3)
Question Text *Have procedures been established to clearly address how and to what degree controllers can change alarm limits or setpoints, or inhibit alarms, or take points off-scan?*
Assets Covered 88980 (72)
Result Notes Admin. Manual Section 3 (3.1) - Alarm Changes (additions or modifications of alarms, setpoints, or priorities must go through MOC process.

Admin. Manual Section 3 (3.2) - Alarm Changes (Alarms may be temporarily suppressed within specific criteria).

Alarms may not be removed without MOC process and and Management approval.
100. Question Result, ID, References Sat, CR.CRMAM.VERIFICATION.P, 195.446(e)(3)
Question Text *Do processes require that any calibration or change to field instruments require verification of alarm setpoints and alarm descriptions?*
Assets Covered 88980 (72)
Result Notes Admin Manual Section A-5 (5.4) - Alarm Testing, Maintenance, and Performance.
101. Question Result, ID, References Sat, CR.CRMAM.ALARMVALUEVERIFY.R, 195.446(e)(3)
Question Text *Do records demonstrate verification of correct safety-related alarm set-point values and alarm descriptors when associated field instruments are calibrated or changed and at least once each calendar year, but at intervals not to exceed 15 months?*
Assets Covered 88980 (72)
Result Notes Reviewed records for point-to-point verifications completed during 2019-2021 audit period for the following points:

CPM Leak Detection (PM1670)

Temp Transmitter (PM0965)

Meter Calibrations (PM0969)

Meter Calibrations Base (PM0976)

High Level Tank (PM1058)

Calibrate Pressure Transmitter (PM1559)
102. Question Result, ID, References Sat, CR.CRMAM.PLANREVIEW.P, 195.446(e)(4)
Question Text *Are there processes to review the alarm management plan at least once each calendar year, but at intervals not exceeding 15 months, in order to determine the effectiveness of the plan?*
Assets Covered 88980 (72)
Result Notes Admin Manual Section A-5 (5.7) - Alarm Testing, Maintenance, and Performance.
103. Question Result, ID, References Sat, CR.CRMAM.PLANREVIEW.R, 195.446(e)(4)
Question Text *Do records indicate review of the alarm management plan at least once each calendar year, but at intervals not exceeding 15 months, in order to determine the effectiveness of the plan?*
Assets Covered 88980 (72)
Result Notes Reviewed records for Annual Review Alarm Management Plan (PM2306) for 2019-2021 audit period.
104. Question Result, ID, References Sat, CR.CRMAM.WORKLOAD.P, 195.446(e)(5)
Question Text *Does the CRM program have a means of identifying and measuring the work load (content and volume of general activity) being directed to an individual controller?*
Assets Covered 88980 (72)

Result Notes Admin Manual Section A-5 (5.6) - Alarm Testing, Maintenance, and Performance.

105. Question Result, ID, References Sat, CR.CRMAM.WORKLOADMONITORING.P, 195.446(e)(5)

Question Text *Is the process of monitoring and analyzing general activity comprehensive?*

Assets Covered 88980 (72)

Result Notes Reviewed "A" Reformer Workload Assessments for 2019-2021 audit period.

Includes alarm reviews, phone usage metrics, manual entries of setpoints or control.

106. Question Result, ID, References Sat, CR.CRMAM.CONTROLLERREACTION.P, 195.446(e)(5)

Question Text *Does the process have a means of determining that the controller has sufficient time to analyze and react to incoming alarms?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-5 (5.6) - Alarm Testing, Maintenance, and Performance.

107. Question Result, ID, References Sat, CR.CRMAM.PERFORMANCEANALYSIS.R, 195.446(e)(5)

Question Text *Has an analysis been performed to determine if controller(s) performance is currently adequate?*

Assets Covered 88980 (72)

Result Notes Reviewed "A" Reformer Workload Assessments for 2019-2021 audit period.

108. Question Result, ID, References Sat, CR.CRMAM.DEFICIENCIES.P, 195.446(e)(6)

Question Text *Is there a process to address how deficiencies found in implementing 195.446(e)(1) through 195.446(e)(5) will be resolved?*

Assets Covered 88980 (72)

Result Notes Maint. Manual Section C-3 - Maintenance Work Management System Work Order Requests.

109. Question Result, ID, References Sat, CR.CRMAM.DEFICIENCIES.R, 195.446(e)(6)

Question Text *Do records indicate deficiencies found in implementing 195.446(e)(1) through 195.446(e)(5) have been resolved?*

Assets Covered 88980 (72)

Result Notes Reviewed PM's and Work Orders for pipeline for 2019-2021.

No outstanding issues or unresolved conflicts.

CR.CRMCMGT: Change Management

110. Question Result, ID, References Sat, CR.CRMCMGT.CHANGEMEETINGS.P, 195.446(f)(1)

Question Text *Is there a process to mandate a control room representative will participate in meetings where changes that could directly or indirectly affect control room operations (including routine maintenance and repairs) are being considered, designed and implemented?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-3 (3) - Affected Personnel

(DC Note) - Operators, mechanics, engineers, and management are part of the process. For example, the "A Reformer" operator is part of the process.

111. Question Result, ID, References Sat, CR.CRMCMGT.CHANGETRAINING.R, 195.446(f)(1)

Question Text *Before implementing changes, do records indicate controllers were provided with notification and training to assure their ability to safely incorporate the proposed change into operations?*

Assets Covered 88980 (72)

Result Notes Reviewed 6/10/2019 MOC memo that was issued for ILI run that was performed 6/13/2019. Memo was issued due to procedure being updated for cleaning pig launch.

112. Question Result, ID, References Sat, CR.CRMCMGT.EMERGENCYCONTACT.P, 195.446(f)(2)

Question Text *Is there a process requiring field personnel and SCADA support personnel to contact the control room when emergency conditions exist?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-3 (4.0) - Communication of Field Changes.

113. Question Result, ID, References Sat, CR.CRMCMGT.CHANGECOORDINATION.P, 195.446(f)(1)

Question Text *Does the process assure changes in field equipment (for example, moving a valve) that could affect control room operations are coordinated with control room personnel?*

Assets Covered 88980 (72)

Result Notes Admin Manual Section A-3 (4.0) - Communication of Field Changes.

114. Question Result, ID, References Sat, CR.CRMCMGT.CHANGECOORDINATION.R, 195.446(f)(1)

Question Text *Do records indicate that changes in field equipment (for example, moving a valve) that could affect control room operations were coordinated with control room personnel?*

Assets Covered 88980 (72)

Result Notes Reviewed 6/10/2019 MOC memo that was issued for ILI run that was performed 6/13/2019. Memo was issued due to procedure being updated for cleaning pig launch.

115. Question Result, ID, References Sat, CR.CRMCMGT.FIELDCONTACT.P, 195.446(f)(2)

Question Text *Does the process require field personnel and SCADA support personnel to contact the control room when making field changes (for example, moving a valve) that affect control room operations?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section A-3 (4.0) - Communication of Field Changes

116. Question Result, ID, References Sat, CR.CRMCMGT.FIELDCHANGES.R, 195.446(f)(2)

Question Text *Do records indicate field personnel and SCADA support personnel contacted the control room when making field changes (for example, moving a valve) that affect control room operations?*

Assets Covered 88980 (72)

Result Notes Reviewed 6/10/2019 MOC memo that was issued for ILI run that was performed 6/13/2019. Memo was issued due to procedure being updated for cleaning pig launch.

CR.CRMEXP: Operating Experience

117. Question Result, ID, References Sat, CR.CRMEXP.REPORTABLEACCIDENTREVIEW.P, 195.446(g)(1)

Question Text *Is there a formal, structured approach for reviewing and critiquing reportable events to identify lessons learned?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section A-4 (1.0) - Accident Review

Reviewed blank copy of Preliminary Incident Report which is used to collect and analyze required data and information.

118. Question Result, ID, References NA, CR.CRMEXP.REPORTABLEACCIDENTREVIEW.R, 195.446(g)(1)

Question Text *Do records indicate reviews of reportable events specifically analyzed all contributing factors to determine if control room actions contributed to the event, and corrected any deficiencies?*

Assets Covered 88980 (72)

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

Reviewed incident report for 2017 pipeline rupture that occurred in Parkland. Incident cause was due to excavation practices and not due to control room error or performance.

119. Question Result, ID, References Sat, CR.CRMEXP.LESSONSLEARNED.P, 195.446(g)(2) (195.446(b)(5))

Question Text *Does the program require training on lessons learned from a broad range of events (reportable incidents/accidents, near misses, leaks, operational and maintenance errors, etc.), even though the control room may not have been at fault?*

Assets Covered 88980 (72)
Result Notes Admin Manual, Section A-4 (1.0) - Accident Review

OPS Manual Appendix 15 - contains overview and summary of lessons learned from 2017 rupture incident.

120. Question Result, ID, References NA, CR.CRMEXP.LESSONSLEARNED.R, 195.446(g)(2) (195.446(b)(5))
Question Text *Has operating experience review training been conducted on lessons learned from a broad range of events (reportable incidents/accidents, near misses, leaks, operational and maintenance errors, etc.)?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

Third party incident in 2017 led to the addition of Appendix 15 in Ops Manual and is reviewed by controllers annually.

CR.CRMTRAIN: Training

121. Question Result, ID, References Sat, CR.CRMTRAIN.CONTROLLERTRAIN.P, 195.446(h)
Question Text *Has a controller training program been established to provide training for each controller to carry out their roles and responsibilities?*
Assets Covered 88980 (72)
Result Notes Admin Manual, Section B-1 - Company Training Policy

122. Question Result, ID, References Sat, CR.CRMTRAIN.CONTROLLERTRAIN.R, 195.446(h)
Question Text *Has a controller training program been implemented to provide training for each controller to carry out their roles and responsibilities?*
Assets Covered 88980 (72)
Result Notes Reviewed OQ records for Task 40 (pipeline operations) for 2019-2021. No issues identified.

123. Question Result, ID, References Sat, CR.CRMTRAIN.TRAININGREVIEW.P, 195.446(h)
Question Text *Have processes been established to review the controller training program content to identify potential improvements at least once each calendar year, but at intervals not to exceed 15 months?*
Assets Covered 88980 (72)
Result Notes Admin Manual, Section B-1(1.6) - Company Training Policy

Ops manual Section V (1C) - Training

124. Question Result, ID, References Sat, CR.CRMTRAIN.TRAININGREVIEW.R, 195.446(h)
Question Text *Have processes been implemented to review the controller training program content to identify potential improvements at least once each calendar year, but at intervals not to exceed 15 months?*
Assets Covered 88980 (72)
Result Notes Reviewed work orders for PM2307 - Annual review MPL Operator Training Program.

125. Question Result, ID, References Sat, CR.CRMTRAIN.TRAININGCONTENT.R, 195.446(h)
Question Text *Does training content address all required material, including training each controller to carry out the roles and responsibilities that were defined by the operator?*
Assets Covered 88980 (72)

126. Question Result, ID, References Sat, CR.CRMTRAIN.AOCLIST.R, 195.446(h)(1)

Question Text *Has a list of the abnormal operating conditions that are likely to occur simultaneously or in sequence been established?*

Assets Covered 88980 (72)

127. Question Result, ID, References Sat, CR.CRMTRAIN.TRAININGABNORMAL.P, 195.446(h)(1)

Question Text *Does the training program provide controller training on recognizing and responding to abnormal operating conditions that are likely to occur simultaneously or in sequence?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section B-1(2.1) - Training Objectives.

128. Question Result, ID, References Sat, CR.CRMTRAIN.TRAINING.R, 195.446(h)(2)

Question Text *Does the training program use a simulator or tabletop exercises to train controllers how to recognize and respond to abnormal operating conditions?*

Assets Covered 88980 (72)

Result Notes Operator does not utilize simulators for training.

Reviewed Drill Design Summary Report for table top conducted on 9/23/2021 with department of ecology.

129. Question Result, ID, References NA, CR.CRMTRAIN.TRAINING.O, 195.446(h)(2)

Question Text *Does the training program use a simulator or tabletop exercises to train controllers how to recognize and respond to abnormal operating conditions?*

Assets Covered 88980 (72)

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

130. Question Result, ID, References Sat, CR.CRMTRAIN.COMMUNICATIONTRAINING.P, 195.446(h)(3)

Question Text *Does the CRM program train controllers on their responsibilities for communication under the operator's emergency response procedures?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section B-1 (3.3) - Emergency Response Drills and Exercises.

131. Question Result, ID, References Sat, CR.CRMTRAIN.SYSKNOWLEDGE.P, 195.446(h)(4)

Question Text *Does the training program provide controllers a working knowledge of the pipeline system, especially during the development of abnormal operating conditions?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section B-1 (2.1) - Training Objectives

132. Question Result, ID, References Sat, CR.CRMTRAIN.INFREQOPLIST.R, 195.446(h)(5)

Question Text *Has a list of pipeline operating setups that are periodically (but infrequently) used been established?*

Assets Covered 88980 (72)

Result Notes Reviewed operating procedures for setups that are periodically used (Ops Manual Section III)

133. Question Result, ID, References Sat, CR.CRMTRAIN.INFREQOPSREVIEW.P, 195.446(h)(5)

Question Text *Do processes specify that, for pipeline operating set-ups that are periodically (but infrequently) used, the controllers must be provided an opportunity to review relevant procedures in advance of their use?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section B-1 (2.4) - Training objectives

134. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINPERSONNEL.P, 195.446(h)(6)

Question Text *Do processes establish who, regardless of location, operationally collaborates with control room personnel?*

Assets Covered 88980 (72)

Result Notes Ops Manual Section II (1) - Operator and Supervision responsibilities.

135. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINFREQ.P, 195.446(h)(6)

Question Text *Do processes define the frequency of new and recurring team training?*

Assets Covered 88980 (72)

Result Notes Ops Manual Section V - Training and Reporting

136. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINCOMPLETE.P, 195.446(h)(6)

Question Text *Do processes address all operational modes and operational collaboration/control?*

Assets Covered 88980 (72)

Result Notes Ops Manuals Sections III and IV.

137. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINEXPERIENCE.P, 195.446(h)(6)

Question Text *Do processes include incorporation of lessons learned from actual historical events and other oil-gas industry events?*

Assets Covered 88980 (72)

Result Notes Ops Manual Appendix 15 - summary and review of 2017 rupture incident.

Training also includes historical review of Plymouth LNG incident in 2015.

138. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINEXERCISE.R, 195.446(h)(6)

Question Text *Do records indicate that training exercises were adequate and involved at least one qualified controller?*

Assets Covered 88980 (72)

Result Notes Reviewed Drill Design Summary Report for table top conducted on 9/23/2021 with department of ecology.

139. Question Result, ID, References NA, CR.CRMTRAIN.TEAMTRAINEXERCISE.O, 195.446(h)(6)

Question Text *Does implementation of a control room team exercise demonstrate performance in accordance with regulatory and process requirements?*

Assets Covered 88980 (72)

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

140. Question Result, ID, References NA, CR.CRMTRAIN.TEAMTRAINIDENTINDIVIDUAL.R, 195.446(h)(6)

Question Text *Do records demonstrate that individuals identified as of January 23, 2018 received team training by January 23, 2019?*

Assets Covered 88980 (72)

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

CR.CRMCOMP: Compliance Validation and Deviations

141. Question Result, ID, References Sat, CR.CRMCOMP.SUBMITPROCEDURES.P, 195.446(i)

Question Text *Are there adequate processes to assure that the operator is responsive to requests from applicable agencies to submit their CRM procedures?*

Assets Covered 88980 (72)

Result Notes Admin Manual, Section D-1 (11.1) - Agency Request for Information

142. Question Result, ID, References Sat, CR.CRMCOMP.SUBMITPROCEDURES.R, 195.446(i)

Question Text *Has the operator been responsive to requests from applicable agencies to submit their CRM procedures?*

Assets Covered 88980 (72)

Result Notes Operator responded timely to UTC requests for current updated CRM manuals regarding this inspection.

143. Question Result, ID, References Sat, CR.CRMCOMP.CRMCOORDINATOR.R, 195.446(i)
Question Text *Is there an individual that is responsible and accountable for compliance with requests from PHMSA or other applicable agencies?*
Assets Covered 88980 (72)
Result Notes Joel Roppo - Chief Engineer.
144. Question Result, ID, References Sat, CR.CRMCOMP.RECORDS.P, 195.446(j)(1)
Question Text *Are records management processes adequate to assure records are sufficient to demonstrate compliance with the CRM rule?*
Assets Covered 88980 (72)
Result Notes Admin Manual Section B-1 (6) - Record Keeping for Training

Maint. Manual Section D-1 (1.7) - Scheduled Inspections and Tests (records kept for three years or the last two periodic tests/inspections, whichever is longer).
145. Question Result, ID, References Sat, CR.CRMCOMP.RECORDS.R, 195.446(j)(1)
Question Text *Are records sufficient to demonstrate compliance with the CRM rule?*
Assets Covered 88980 (72)
146. Question Result, ID, References Sat, CR.CRMCOMP.ELECTRONICRECORDS.R, 195.446(j)(1)
Question Text *Are electronic records properly stored, safeguarded, and readily retrievable?*
Assets Covered 88980 (72)
Result Notes Work order records are maintained in Maximo system.

Other pertinent electronic records are kept on internal secure server with restricted access.
147. Question Result, ID, References Sat, CR.CRMCOMP.DEVIATIONS.P, 195.446(j)(2)
Question Text *Are there processes to demonstrate and provide a documented record that every deviation from any CRM rule requirement was necessary for safe operation?*
Assets Covered 88980 (72)
Result Notes Admin. Manual Section A-2 (2.2) - Shift Length and Rotations.
148. Question Result, ID, References NA, CR.CRMCOMP.DEVIATIONS.R, 195.446(j)(2)
Question Text *Were all deviations documented in a way that demonstrates they were necessary for safe operation?*
Assets Covered 88980 (72)
Result Notes No such event occurred, or condition existed, in the scope of inspection review.

Except as required to be disclosed by law, any inspection documentation, including completed protocol forms, summary reports, executive summary reports, and enforcement documentation are for internal use only by federal or state pipeline safety regulators. Some inspection documentation may contain information which the operator considers to be confidential. In addition, supplemental inspection guidance and related documents in the file library are also for internal use only by federal or state pipeline safety regulators (with the exception of documents published in the federal register, such as advisory bulletins). Do not distribute or otherwise disclose such material outside of the state or federal pipeline regulatory organizations. Requests for such information from other government organizations (including, but not limited to, NTSB, GAO, IG, or Congressional Staff) should be referred to PHMSA Headquarters Management.