Inspection Output (IOR)

Generated on 2024.September.10 10:38

Report Filters

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

Inspection Information

Inspection Name 8773 - Cascade Natural Gas - Control Room	Operator(s) CASCADE NATURAL GAS CORP (2128)	Plan Submitted 01/23/2024
	Lead David Cullom	Plan Approval 01/25/2024 by Dennis Ritter
Status LOCKED	Observer(s) Lex Vinsel, Anthony Dorrough, Derek Norwood, Scott Anderson, John Trier, Marina Rathbun, Tom Green, Jason Hoxit	
Start Year 2024		All Activity Start 06/04/2024
System Type GD	Supervisor Dennis Ritter	All Activity End 06/05/2024
Protocol Set ID WA.GD.2023.02	Director Scott Rukke	Inspection Submitted 06/25/2024
		Inspection Approval 06/26/2024 by Scott Rukke

Inspection Summary

Inspection Scope and Summary
This Control Room Inspection consisted of procedures, records, and a field review.

Facilities visited and Total AFOD
The Control Room at CNCG Headquarters in in Kennewick, Wa. was visited for the field portion to review records maintained on-site, observe the HMI displays, and to see the shift change process of turnover.

Summary of Significant Findings
There were no probable violations or areas of concern.

Primary Operator contacts and/or participants
Colby Lundstrom, colby.lundstrom@mdu.com MDU Compliance Manager

Wendy McDonough, wendy.mcdonough@mdu.com MDU Compliance Specialist

Darren Tinnerstet, darren.tinnerstet@mdu.com MDU Compliance Specialist

Operator executive contact and mailing address for any official correspondence

Mr. Pat Darras

VP, Engineering & Ops Services

400 North 4th Street

Bismarck, North Dakota 58501

Directives: Control Room Management from Crosswalk 1/23/2024

Scope (Assets)

#	Short Name	Long Name	Asset Type	Asset IDs	Excluded Topics	Planned	Required	Total Inspected	Required % Complete
1.	88961 (75)	Cascade Natural Gas-HEADQUARTERS	unit	88961	--	144	144	144	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.	88961 (75)	Control Room Management	PRO, PRR, FR, GDIM, LPGIM, MISCTOPICS, 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.	Records and Procedure Review	--	06/04/2024 06/05/2024	--	all planned questions	all assets	all types	144	144	144	100.0%

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

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

Forms

No.	Entity	Form Name	Status	Date Completed	Activity Name	Asset
1.	Attendance List	Records and Field Review	COMPLETED	06/14/2024	Records and Procedure Review	88961 (75)

Results (all values, 144 results)

MISCTOPICS.CRM: Control Room Management

1. Question Result, ID, References	Sat, CR.CRMGEN.CRMCRITERIA.P, 192.631(a)(2)
Question Text	*Do procedures adequately address the process and criteria to determine which facilities are control rooms?*
Assets Covered	88961 (75)
Result Notes	Per the operator: This is in OPS 631 - Scada System Overview specifically addresses the location of MDU's Control Room location, and back-up location. OPS 631 implemented 4/1/14, prior to that plan was administered by WBI Energy Gas Control Center. The manual states in OPS 631: Control Room (CR)…an operations center staffed by personnel charged with the responsibility for remotely monitoring and controlling a pipeline facility. The MDUG CR is staffed 24 hours-a-day; seven (7) days-a-week with one (1) MDUG GC on duty at all times.

Report Filters: Results: all

2. Question Result, ID, References Sat, CR.CRMGEN.CRMMGMT.P, 192.631(a)(2)

Question Text *Are CRM procedures formalized and controlled?*

Assets Covered 88961 (75)

Result Notes Per the operator, refer to Section 8 of OPS 631 for MOC in relation to CRM: OPS 631 Step 8.2 Performing MOC - Any changes made to the procedure will require an MOC.

CHANGE MANAGEMENT

8.1. Change Management CR Participation

8.1.1. The MDUG CR participates in the MOC process when those changes impact the MDUG distribution

system. The MOC process helps prevent injuries, accidents, and other losses through the effective

management and communication of system changes. The MDUG CR review and approval shall be required

if changes affect the distribution system, pipeline operations, configurations, SCADA alarms,

and/or SCADA displays.

3. Question Result, ID, References Sat, CR.CRMGEN.CRMIMPLEMENT.R, 192.631(a)(2)

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

Assets Covered 88961 (75)

Result Notes The operator indicated: Control Room program implemented on 4-1-2010 (4/1/10 – 4/1/14 it was monitored by WBI Energy Gas Control in Bismarck), See page 21 of the Change/Review Log in OPS 631 for details.

Revision Date: June 27, 2023

OPSMOC-1716

Page 20 of 22

04/01/2010 Control Room Management administered by WBI Energy Gas Control Center

04/01/2014 Original document

09/01/2014 Updated General Applicability and Definitions, Deleted attachments to Introduction, corrected

4. Question Result, ID, References Sat, CR.CRMGEN.CRMPROCLOCATION.O, 192.631(a)(2)

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

Assets Covered 88961 (75)

Result Notes A hard copy of the procedures was available in the control room during the time of inspection.

5. Question Result, ID, References Sat, CR.CRMRR.RESPONSIBLE.P, 192.631(b)

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

Assets Covered 88961 (75)

Result Notes OPS 631 Step 4 defines Roles and Responsibilities – Control Room has 1 Controller and a Back-up Controller on shift

M-F.

On the weekends the control room is also staffed 24/7.

4. ROLES AND RESPONSIBILITIES

4.1. MDUG GC are responsible for safely operating the MDUG distribution system 24 hours-a-day; seven (7) days-a-week. The MDUG CR is located in a secure area and is staffed with one (1) qualified MDUG GC. Only qualified MDUG GC are permitted to sign-on to the SCADA console using their individual SCADA log-on credentials.

6. Question Result, ID, References	Sat, CR.CRMRR.QUALCONTROL.P, 192.631(b)
Question Text	*Are there provisions in place to assure that only qualified individuals may assume control at any console/desk?*
Assets Covered	88961 (75)
Result Notes	OPS 631 Step 4.1" Only qualified MDUG GC are permitted to sign-on to the SCADA console using their individual SCADA log-on credentials.

4. ROLES AND RESPONSIBILITIES

4.1. MDUG GC are responsible for safely operating the MDUG distribution system 24 hours-a-day; seven (7) days-a-week. The MDUG CR is located in a secure area and is staffed with one (1) qualified MDUG GC. **Only qualified MDUG GC are permitted to sign-on to the SCADA console using their individual SCADA log-on credentials.**

7. Question Result, ID, References	Sat, CR.CRMRR.DOMAINCHANGE.P, 192.631(b)
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	88961 (75)
Result Notes	The operator stated: OPS 631 beginning at Step 4.13 describes Shift Turnover process and anytime a Controller needs to leave the console for longer than 20 minutes.

On page 5 of 22

4.13. MDUG GC will follow the SHIFT TURN OVER PROCESS for any shift change and anytime an MDUG GC needs to leave the console for longer than 20 minutes.

4.13.1. At the beginning of each shift or transfer of responsibilities, the incoming shift receives a briefing on current operations and activities that occurred during the previous shift. The MDUG Gas Control Management Team has allotted 30 minutes for shift turnover. These 30 minutes are part of the MDUG GC normal shift.

4.13.2. Transfer of responsibilities to or from the Backup CR will be done over the telephone when applicable. If the same controller is moving from the main CR to the backup or vice versa, no turnover is required. In addition to the turnover sheet, the MDUG GC will fill out the Backup CR Startup checklist (CR-1 Attachment 22).

8. Question Result, ID, References	NA, CR.CRMRR.RESPCHANGE.P, 192.631(b)
Question Text	*Do processes address a controller's role during temporary impromptu (unplanned) changes in controller responsibilities?*
Assets Covered	88961 (75)
Result Notes	The operator stated: OPS 631 Step 5.6 Failure of MDUG CR Function (5.6.1 and 5.6.2)

I believe this question is N/A due to only one controller at a time staffing the CR.

9. Question Result, ID, References	Sat, CR.CRMRR.COMMANDVERIFY.P, 192.631(b)
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	88961 (75)

Report Filters: Results: all

Result Notes Per the operator this procedure is located in: OPS 631 Step 4.13.4

Page 6 of 22 states:

4.13.4. Before leaving a console, the MDUG GC must ensure all issued SCADA commands have been fulfilled, all verbal requests communicated to Field Operations personnel are complete, and the MDUG GC verbally communicate their intentions with the other MDUG GC in the MDUG CR.

10. Question Result, ID, References Sat, CR.CRMRR.AUTHORITYABNORMAL.P, 192.631(b)(2)

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

Assets Covered 88961 (75)

Result Notes Per the operator this procedure is located in: OPS 631 Step 4.6

Page 5 of 22 - Rev 6/27/2023

4.6. MDUG GC are responsible for normal operations and recognizing and reacting to abnormal and emergency conditions. MDUG GC are also responsible for performing other duties as assigned. When abnormal or emergency conditions occur, MDUG CR will contact the appropriate personnel. (Refer to CR-01 located in the MDUG CR for the appropriate Call-Out Procedure for Critical/Safety Alarms instructions.)

11. Question Result, ID, References Sat, CR.CRMRR.PRESSLIMITS.O, 192.631(b)(2) (192.619(a), 192.631(e)(1))

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

Assets Covered 88961 (75)

Result Notes Yes, Questions about MAOPs for specific line segments were requested and the controller, Mike, was able to demonstrate. He also explained that they monitor to make sure the systems stay below the MAOPs.

12. Question Result, ID, References Sat, CR.CRMRR.AUTHORITYEMERGENCY.P, 192.631(b)(3) (192.615(a)(8), 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 88961 (75)

Result Notes Per the operator this procedure is located in: OPS 631 beginning at Step 4.6 – 4.11

Page 5 of 22 - Rev 6/27/2023

4.6. MDUG GC are responsible for normal operations and recognizing and reacting to abnormal and emergency conditions. MDUG GC are also responsible for performing other duties as assigned. When abnormal or emergency conditions occur, MDUG CR will contact the appropriate personnel. (Refer to CR-01 located in the MDUG CR for the appropriate Call-Out Procedure for Critical/Safety Alarms instructions.)

4.7. MDUG GC that are signed into the SCADA console are responsible for safely operating the MDUG distribution systems during normal, abnormal, and emergency operating conditions.

4.8. MDUG GC who are signed into the SCADA system assume the leadership role during normal, abnormal, and emergency situations, and have the authority to direct other MDUG GC in the MDUG CR and Field Operations personnel to provide assistance, as required.

4.9. In the case of an explosion, fire, vandalism or sabotage, weather related problems, or other emergency which might threaten life, property, the environment, or render this service or any part incapable of continued operation, MDUG GC may take such steps to provide whatever services are required to deal with such emergency and shall promptly report such emergency to appropriate personnel. MDUG GC will notify the MDUG Gas Control Management Team. after assessing the situation, MDUG GC may notify Gas Supply, Field Operations supervision (e.g., On-Call Supervisors, Field Operations Managers, and/or Region Directors) as needed. After initial notification to Field Operations supervision, the notified supervisor will be responsible for additional notifications as they deem

necessary. When additional GO notification is required, refer to OPS 9 – Gas Emergency Notification and Reporting.

4.10. MDUG GC will call the GO Notification Hotline (701) 222-7942 for any event that may have significant impact on the safe and reliable operation of the natural gas system. Examples would include interruption in transmission supply from gas providers, natural disasters (tornadoes, floods, earthquakes, wildfires), acts of terrorism, or major vandalism, etc.

4.11. MDUG GC authority extends to coordinating activities with Field Operations personnel, communicating with internal and external customers, interconnecting pipelines, the public, and MDUG personnel; any ESD (emergency shutdown) on transportation customers, laterals, and meter stations during normal, abnormal, and emergency conditions.

13. Question Result, ID, References	Sat, CR.CRMRR.EVACUATION.P, 192.631(b)(3)
Question Text	*Do processes specifically address the controller's responsibilities in the event the control room must be evacuated?*
Assets Covered	88961 (75)
Result Notes	Per the operator this procedure is located in: OPS 631 Step 5.6.2

Page 8 of 22 - Rev 6/27/2023

5.6.2. If the SCADA system is still functional but there is a failure of the physical MDUG CR, MDUG GC will notify MDUG GC Supervision. MDUG GC Supervision will make the decision to either transfer MDUG GC responsibilities to the Backup CR or notify the CXT. In the event that the Backup CR is not activated within four (4) hours, CXT will notify the appropriate MDUG personnel to begin monitoring of their respective distribution systems. MDUG personnel will check SCADA gate station pressures, line heaters, and odorizers every four (4) hours and contact MDUG GC if levels are abnormal.

14. Question Result, ID, References	Sat, CR.CRMRR.COMMSYSFAIL.P, 192.631(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	88961 (75)
Result Notes	Per the operator this procedure is located in: OPS 631 Step 5.6.1

5.6. Failure of MDUG CR Function

5.6.1. If the SCADA system fails, MDUG GC will notify the Customer Experience Team (CXT) and the CXT will notify the appropriate MDUG personnel to begin the monitoring of their respective distribution systems. In addition, MDUG GC will notify SCADA Support Personnel if more assistance is needed.

15. Question Result, ID, References	Sat, CR.CRMRR.HANDOVER.P, 192.631(b)(4) (192.631(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	88961 (75)
Result Notes	Per the operator this procedure is located in: OPS 631 beginning at Step 4.13 outlines the Shift Change process.

4.13. MDUG GC will follow the SHIFT TURN OVER PROCESS for any shift change and anytime an MDUG GC needs to leave the console for longer than 20 minutes.

4.13.1. At the beginning of each shift or transfer of responsibilities, the incoming shift receives a briefing on current operations and activities that occurred during the previous shift. The MDUG Gas Control Management Team has allotted 30 minutes for shift turnover. These 30 minutes are part of the MDUG GC normal shift.

4.13.2. Transfer of responsibilities to or from the Backup CR will be done over the telephone when applicable. If the same controller is moving from the main CR to the backup or vice versa, no turnover is

required. In addition to the turnover sheet, the MDUG GC will fill out the Backup CR Startup checklist (CR-1 Attachment 22).

4.13.3. During the shift turnover process, the outgoing shift will log-off the SCADA consoles and the incoming shift will log-on to the SCADA consoles and assume responsibility for system operations. The MDUG GC that is logged on to the SCADA console will be responsible for alarms and alerts during the shift change process and until the oncoming MDUG GC logs on. Each MDUG GC on duty is responsible for documenting their activities during the shift in the Operator Gas Log and the Gas Control Shift Turnover form.

4.13.4. Before leaving a console, the MDUG GC must ensure all issued SCADA commands have been fulfilled, all verbal requests communicated to Field Operations personnel are complete, and the MDUG GC verbally communicate their intentions with the other MDUG GC in the MDUG CR.

16. Question Result, ID, References Sat, CR.CRMRR.HANDOVER.O, 192.631(b)(4) (192.631(c)(5))

Question Text *Do observations indicate adequate hand-over of responsibility to the oncoming shift?*

Assets Covered 88961 (75)

Result Notes I was in the control room for the shift hand over from days to nights and it went smoothly.

17. Question Result, ID, References Sat, CR.CRMRR.HANDOVERDOC.P, 192.631(b)(4) (192.631(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 88961 (75)

Result Notes Per the operator this procedure is located in: OPS 631 Step 4.13.3

**(The last sentence in 4.13.3 talks about Operator Gas Log and Turnover Form.)

4.13.3. During the shift turnover process, the outgoing shift will log-off the SCADA consoles and the incoming shift will log-on to the SCADA consoles and assume responsibility for system operations. The MDUG GC that is logged on to the SCADA console will be responsible for alarms and alerts during the shift change process and until the oncoming MDUG GC logs on. Each MDUG GC on duty is responsible for documenting their activities during the shift in the Operator Gas Log and the Gas Control Shift Turnover form.

The CR-01 Attachment 11 Control Room Shift Turnover form is now completed in software called JIRA.

18. Question Result, ID, References Sat, CR.CRMRR.HANDOVERDOC.R, 192.631(b)(4) (192.631(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 88961 (75)

Result Notes Several samples were provided by the operator and reviewed.

April 14 of 2023 and January 10th of 2021 were also randomly selected and reviewed.

19. Question Result, ID, References Sat, CR.CRMRR.HANDOVEROVERLAP.P, 192.631(b)(4)

Question Text *Do processes require the controllers to discuss recent and impending important activities ensuring adequate overlap?*

Assets Covered 88961 (75)

Result Notes Per the operator this procedure is located in: OPS 631 Steps 4.13.4

4.13.4. Before leaving a console, the MDUG GC must ensure all issued SCADA commands have been fulfilled, all verbal requests communicated to Field Operations personnel are complete, and the MDUG GC verbally communicate their intentions with the other MDUG GC in the MDUG CR.

The discussion, overlap, form and briefings are also discussed in:

4.13.1. At the beginning of each shift or transfer of responsibilities, the incoming shift receives a briefing on current operations and activities that occurred during the previous shift. The MDUG Gas Control Management Team has allotted 30 minutes for shift turnover. These 30 minutes are part of the MDUG GC normal shift.

4.13.2. Transfer of responsibilities to or from the Backup CR will be done over the telephone when applicable. If the same controller is moving from the main CR to the backup or vice versa, no turnover is required. In addition to the turnover sheet, the MDUG GC will fill out the Backup CR Startup checklist (CR-1 Attachment 22).

4.13.3. During the shift turnover process, the outgoing shift will log-off the SCADA consoles and the incoming shift will log-on to the SCADA consoles and assume responsibility for system operations. The MDUG GC that is logged on to the SCADA console will be responsible for alarms and alerts during the shift change process and until the oncoming MDUG GC logs on. Each MDUG GC on duty is responsible for documenting their activities during the shift in the Operator Gas Log and the Gas Control Shift Turnover form.

20. Question Result, ID, References	Sat, CR.CRMRR.HANDOVERALTERNATIVE.P, 192.631(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	88961 (75)
Result Notes	Per the operator this procedure is located in: OPS 631 Step 6.3.4

Step 6.3.4 discusses schedule shortages

6.3.4. MDUG has implemented a schedule with six (6) MDUG GC to further limit the possibilities of exceeding the hours-of-service restrictions. This typically allows for one (1) MDUG GC to be scheduled "On-Call" and an additional MDUG GC scheduled as MDUG CR support during normal business hours. Both are utilized to cover both planned and unplanned schedule shortages.

21. Question Result, ID, References	Sat, CR.CRMRR.UNATTENDCONSOLE.P, 192.631(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	88961 (75)
Result Notes	Per the operator this procedure is located in: OPS 631 Step 4.13. & Step 4.14

4.13. MDUG GC will follow the SHIFT TURN OVER PROCESS for any shift change and anytime an MDUG GC needs to leave the console for longer than 20 minutes.

4.13.1. At the beginning of each shift or transfer of responsibilities, the incoming shift receives a briefing on current operations and activities that occurred during the previous shift. The MDUG Gas Control Management Team has allotted 30 minutes for shift turnover. These 30 minutes are part of the MDUG GC normal shift.

4.13.2. Transfer of responsibilities to or from the Backup CR will be done over the telephone when applicable. If the same controller is moving from the main CR to the backup or vice versa, no turnover is required. In addition to the turnover sheet, the MDUG GC will fill out the Backup CR Startup checklist (CR-1 Attachment 22).

4.13.3. During the shift turnover process, the outgoing shift will log-off the SCADA consoles and the incoming shift will log-on to the SCADA consoles and assume responsibility for system operations. The MDUG GC that is logged on to the SCADA console will be responsible for alarms and alerts during the shift change process and until the oncoming MDUG GC logs on. **Each MDUG GC on duty is responsible for documenting their activities during the shift in the Operator Gas Log and the Gas Control Shift Turnover form.**

4.13.4. Before leaving a console, the MDUG GC must ensure all issued SCADA commands have been fulfilled, all verbal requests communicated to Field Operations personnel are complete, and the MDUG GC verbally communicate their intentions with the other MDUG GC in the MDUG CR.

4.14. If the MDUG GC on duty needs to leave the console for less than 20 minutes, they still are responsible for safely operating the MDUG distribution systems.

22. Question Result, ID, References   Sat, CR.CRMRR.CONSOLECOVERAGE.P, 192.631(b)(4)

Question Text *Do processes maintain adequate console coverage during shift hand-over?*

Assets Covered 88961 (75)

Result Notes Per the operator this procedure is located in: OPS 631 Step 4.13.1

4.13.1. At the beginning of each shift or transfer of responsibilities, the incoming shift receives a briefing on current operations and activities that occurred during the previous shift. The MDUG Gas Control Management Team has allotted 30 minutes for shift turnover. These 30 minutes are part of the MDUG GC normal shift.

23. Question Result, ID, References   Sat, CR.CRMRR.OTHERAUTHORITYDISALLOW.P, 192.631(b)(5)

Question Text *Do processes disallow others to have authority to direct or supersede the specific technical actions of a controller?*

Assets Covered 88961 (75)

Result Notes Per the operator this procedure is located in: OPS 631 Step 4.15

4.15. The supervisor is not operationally qualified (administrative supervisor) and may only advise the MDUG GC on what general tasks to accomplish, but not the precise actions that would otherwise come from an operationally qualified supervisor. Only operationally qualified personnel are allowed to direct or supersede specific technical actions of a controller. MDUG GC are the only operationally qualified personnel in the Utilities Group.

24. Question Result, ID, References   Sat, CR.CRMRR.OTHERAUTHORITYDISALLOW.R, 192.631(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 88961 (75)

Result Notes A record was provided from 2020 and reviewed. This is also done when there is a new controller brought on-board. There has not been any movement of employees in the past couple of years as they have not had any turnover.

25. Question Result, ID, References   Sat, CR.CRMRR.OTHERAUTHORITYDISALLOW.O, 192.631(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 88961 (75)

Result Notes The controllers interviewed are aware that only the person signed into the HMI console can make operational decisions and made that very clear.

26. Question Result, ID, References   Sat, CR.CRMRR.OTHERAUTHORITYQUAL.P, 192.631(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 88961 (75)

Result Notes This is contained in section 4.15 of OPS 631.

Page 6 of 22

4.15. The supervisor is not operationally qualified (administrative supervisor) and may only advise the MDUG GC on what general tasks to accomplish, but not the precise actions that would otherwise come from an operationally qualified supervisor. Only operationally qualified personnel are allowed to direct or supersede specific technical actions of a controller. MDUG GC are the only operationally qualified personnel in the Utilities Group.

27. Question Result, ID, References   NA, CR.CRMRR.OTHERAUTHORITYQUAL.R, 192.631(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 88961 (75)

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

28. Question Result, ID, References NA, CR.CRMRR.OTHERAUTHORITYIMPLEMENT.P, 192.631(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 88961 (75)

Result Notes 4.15. The supervisor is not operationally qualified (administrative supervisor) and may only advise the MDUG GC on what general tasks to accomplish, but not the precise actions that would otherwise come from an operationally qualified supervisor. Only operationally qualified personnel are allowed to direct or supersede specific technical actions of a controller. MDUG GC are the only operationally qualified personnel in the Utilities Group.

Per the operator: N/A - No one can direct or supersede.

Additionally, controllers not signed in cannot direct the signed in controller.

29. Question Result, ID, References NA, CR.CRMRR.OTHERAUTHORITYLIST.R, 192.631(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 88961 (75)

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

No records provided or available.

30. Question Result, ID, References NA, CR.CRMRR.OTHERAUTHORITYIMPLEMENT.R, 192.631(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 88961 (75)

Result Notes No such event occurred, or condition existed, in the scope of inspection review. Only the controller that is logged in can operate the system

No records provided or available.

31. Question Result, ID, References NA, CR.CRMRR.OTHERAUTHORITYIMPLEMENT.O, 192.631(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 88961 (75)

Result Notes No one is authorized to supersede a controller at the console who is on shift. No such event occurred, or condition existed, in the scope of inspection review.

32. Question Result, ID, References Sat, CR.SCADA.SYSTEMMOC.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 7.12.1 Management of Change

This is more appropriately addressed under Section 5.3 of OPS 631

5.3. SCADA Support Personnel will adopt API Recommended Practices (RP) 1165 with the existing SCADA system as well as new or expanded SCADA Systems. Any display changes will be reviewed by MDUG CR personnel and approved using the 1165 Deviation form. Any deviations will be documented in the 1165 Deviation form located in the MDUG CR.

33. Question Result, ID, References Sat, CR.SCADA.DISPLAYCONFIG.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.3

5.3. SCADA Support Personnel will adopt API Recommended Practices (RP) 1165 with the existing SCADA system as well as new or expanded SCADA Systems. Any display changes will be reviewed by MDUG CR personnel and approved using the 1165 Deviation form. Any deviations will be documented in the 1165 Deviation form located in the MDUG CR.

34. Question Result, ID, References Sat, CR.SCADA.1165HUMANFACTORS.O, 192.631(c)(1)

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

Assets Covered 88961 (75)

Result Notes For all three service territories, the display consoles have consistency, information flow, and amount of audible or visual clutter is minimal.

35. Question Result, ID, References Sat, CR.SCADA.DISPLAYOBJECTS.O, 192.631(c)(1)

Question Text *Has section 8 of API RP 1165 regarding display object characteristics been implemented?*

Assets Covered 88961 (75)

Result Notes This control room is used for multiple business units across MDU service territory. Each console and representations of unique service areas are displayed the same for color, contrast, and symbology.

36. Question Result, ID, References Sat, CR.SCADA.DISPLAYDYNAMICS.R, 192.631(c)(1)

Question Text *Has Section 9 of API RP 1165 regarding display object dynamics been implemented?*

Assets Covered 88961 (75)

Result Notes Data off scan/on scan is very rare. Occasionally alarms are inhibited. Horn Rapids and Lamb Weston were provided. I also reviewed additional records when visiting the control room that I had requested during the records portion. They were suitable.

37. Question Result, ID, References Sat, CR.SCADA.ADMINISTRATION.R, 192.631(c)(1)

Question Text *Have applicable paragraphs of section 11 of API RP 1165 administration been implemented?*

Assets Covered 88961 (75)

Result Notes The operator provided records that demonstrated that they had consistency between the main and backup control room. This is the only control room in the MDU system covering several states so consistency is a non issue in this case. The same nomenclature and measurement standards are used between the control room and remote locations.

38. Question Result, ID, References NA, CR.SCADA.1165IMPRACTICAL.R, 192.631(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 88961 (75)

Result Notes Each paragraph item has been implemented for each system console and annual records of RP1165 compliance were provided and reviewed.

39. Question Result, ID, References Sat, CR.SCADA.SETPOINT.P, 192.631(c)(2)

Question Text *Does the process adequately define safety-related points?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.5.4.1 and 5.5.4.2.

5.5.4.1. MDUG GC and/or the MDUG Gas Control Management Team will review all MOC request forms submitted to MDUG GC for any addition, replacement, removal, or relocation of Safety Related Points. (Refer to CR-01 in the MDUG CR for safety related points.)

5.5.4.2. The MDUG Gas Control Management Team will review all JIRA requests submitted for SCADA system display changes for any additions, removals, or display changes that include defined safety related points.

40. Question Result, ID, References Sat, CR.SCADA.SETPOINT.R, 192.631(c)(2)

Question Text *Do records indicate safety-related points have been adequately implemented?*

Assets Covered 88961 (75)

Result Notes Mark Evans displayed the set point review for several facilities in Washington State for a date I randomly chose - (5/24/2021). "G to J" are the safety related set points. There is also an annual internal review. I was provided that communication documentation of the annual task completion for evaluating safety-related points.

41. Question Result, ID, References Sat, CR.SCADA.POINTVERIFY.P, 192.631(c)(2)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.5.1

5.5. Point-To-Point Verification Procedure

5.5.1. This procedure details the policy for conducting Point-To-Point verification between SCADA displays and related field equipment. Point-To-Point verification between MDUG GC and field technicians shall be conducted when any safety related equipment is added, moved, or replaced, or if any other changes are made, including SCADA displays, that impact safety related points.

42. Question Result, ID, References Sat, CR.SCADA.POINTVERIFY.R, 192.631(c)(2)

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

Assets Covered 88961 (75)

Result Notes Horn Rapids and Bremerton gate were reviewed. When a point changes or the equipment is calibrated - a test is performed. Also reviewed were Mt Vernon 1/20/2021, Wenatchee 12/1/2020, and Quincy 12/1/2020.

43. Question Result, ID, References Sat, CR.SCADA.POINTVERIFYEXTENT.P, 192.631(c)(2)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.5.5 – Performing Point to Point Verification – describes P2P Verification process

5.5.5. Performing Point-To-Point Verification

5.5.5.1. MDUG Field Operations personnel will provide a program list for any new safety related points or, an address list indicating any program changes to existing points.

5.5.5.2. MDUG GC will create/maintain a Point-To-Point Verification spreadsheet and ensure any new safety related points are added.

5.5.5.3. The MDUG Gas Control Management Team will create a JIRA ticket and coordinate with SCADA support personnel to make any necessary SCADA display changes.

5.5.5.4. MDUG GC will coordinate with Field Operations personnel and use the Point-To-Point Verification spreadsheet to perform the processes.

44. Question Result, ID, References Sat, CR.SCADA.POINTVERIFYEXTENT.R, 192.631(c)(2)

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

Assets Covered 88961 (75)

Result Notes I reviewed these with the operator. Please see the response to question 42.

45. Question Result, ID, References Sat, CR.SCADA.POINTVERFIYINTVL.P, 192.631(c)(2)

Question Text *Is there an adequate process for defining when the point-to-point verification must be completed?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.5.1

5.5.1. This procedure details the policy for conducting Point-To-Point verification between SCADA displays and related field equipment. Point-To-Point verification between MDUG GC and field technicians shall be conducted when any safety related equipment is added, moved, or replaced, or if any other changes are made, including SCADA displays, that impact safety related points.

46. Question Result, ID, References Sat, CR.SCADA.POINTVERFIYINTVL.R, 192.631(c)(2)

Question Text *Do records indicate the point-to-point verification has been completed at the required intervals?*

Assets Covered 88961 (75)

Result Notes (2) Conduct a point-to-point verification between SCADA displays and related field equipment when field equipment is added or moved and when other changes that affect pipeline safety are made to field equipment or SCADA displays

This is discussed in question 42.

47. Question Result, ID, References NA, CR.SCADA.POINTVERIFY.O, 192.631(c)(2)

Question Text *Are point-to-point verifications performed adequately when required?*

Assets Covered 88961 (75)

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

Logs were reviewed and the controllers discussed the steps when equipment is calibrated or replaced. They perform a point to point.

48. Question Result, ID, References Sat, CR.SCADA.COMMPLAN.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.6 "Failure of MUDG CR Functions" – describes processes if failure/outage occurs.

5.6.1. If the SCADA system fails, MDUG GC will notify the Customer Experience Team (CXT) and the CXT will notify the appropriate MDUG personnel to begin the monitoring of their respective distribution systems. In addition, MDUG GC will notify SCADA Support Personnel if more assistance is needed.

49. Question Result, ID, References Sat, CR.SCADA.COMMPLAN.R, 192.631(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 88961 (75)

Result Notes Reviewed 2023 dates in operator's SharePoint. 2021 was also performed on 9-10-2021 and 2022 was completed on 9-27-22.

50. Question Result, ID, References Sat, CR.SCADA.BACKUPSCADA.O, 192.631(c)

Question Text *Is there a backup SCADA system?*

Assets Covered 88961 (75)

Result Notes Yes there is. We did not perform an unannounced simulation of failure, but the operator trains very regularly for Loss of Communications.

51. Question Result, ID, References NA, CR.SCADA.BACKUPSCADADEV.P, 192.631(c)(4)

Question Text *Has the use of the backup SCADA system for development work been defined?*

Assets Covered 88961 (75)

Report Filters: Results: all

Result Notes N/A - This is not done. Both systems are the same and not used for RnD

Per the operator: OPS 631 Step 5.6.2

5.6.2. If the SCADA system is still functional but there is a failure of the physical MDUG CR, MDUG GC will notify MDUG GC Supervision. MDUG GC Supervision will make the decision to either transfer MDUG GC responsibilities to the Backup CR or notify the CXT. In the event that the Backup CR is not activated within four (4) hours, CXT will notify the appropriate MDUG personnel to begin monitoring of their respective distribution systems. MDUG personnel will check SCADA gate station pressures, line heaters, and odorizers every four (4) hours and contact MDUG GC if levels are abnormal.

52. Question Result, ID, References Sat, CR.SCADA.BACKUPSCADATEST.P, 192.631(c)(4)

Question Text *Is the backup SCADA system required to be tested at least once each calendar year at intervals not to exceed 15 months?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.7.1

5.7. Test Backup Systems

5.7.1. The MDUG Backup CR functional capabilities will be tested once each calendar year, not to exceed 15 months.

53. Question Result, ID, References Sat, CR.SCADA.BACKUPSCADATEST.R, 192.631(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 88961 (75)

Result Notes Reviewed 2021- 2023 none exceeded the 15 months

54. Question Result, ID, References Sat, CR.SCADA.BACKUPSCADAVERIFY.P, 192.631(c)(4)

Question Text *Is testing required to verify adequate processes are 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 88961 (75)

Result Notes OPS 631 Step 5.6.3

5.6.3. Annual testing will be performed at least once each calendar year, not to exceed 15 months, to ensure the communication plan is efficient for a total loss of SCADA. The MDUG Gas Control Management Team will coordinate this testing and records shall be maintained in the MDUG CR.

55. Question Result, ID, References Sat, CR.SCADA.BACKUPSCADAVERIFY.R, 192.631(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 88961 (75)

Result Notes The annual communications outage drills were reviewed and there were no issues.

56. Question Result, ID, References NA, CR.SCADA.BACKUPSCADAADEQUACY.R, 192.631(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 88961 (75)

Result Notes The Backup control room is a mirror of the production system.

57. Question Result, ID, References Sat, CR.SCADA.BACKUPSCADATRANSFER.P, 192.631(c)(4)

Question Text *Do processes adequately address and test the logistics of transferring control to a backup control room?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.6.2 and 5.6.3

5.6. Failure of MDUG CR Function

5.6.1. If the SCADA system fails, MDUG GC will notify the Customer Experience Team (CXT) and the CXT will notify the appropriate MDUG personnel to begin the monitoring of their respective distribution systems. In addition, MDUG GC will notify SCADA Support Personnel if more assistance is needed.

5.6.2. If the SCADA system is still functional but there is a failure of the physical MDUG CR, MDUG GC will notify MDUG GC Supervision. MDUG GC Supervision will make the decision to either transfer MDUG GC responsibilities to the Backup CR or notify the CXT. In the event that the Backup CR is not activated within four (4) hours, CXT will notify the appropriate MDUG personnel to begin monitoring of their respective distribution systems. MDUG personnel will check SCADA gate station pressures, line heaters, and odorizers every four (4) hours and contact MDUG GC if levels are abnormal.

5.6.3. Annual testing will be performed at least once each calendar year, not to exceed 15 months, to ensure the communication plan is efficient for a total loss of SCADA. The MDUG Gas Control Management Team

58. Question Result, ID, References   Sat, CR.SCADA.BACKUPSCADARETURN.P, 192.631(c)(4)

Question Text *Do procedures adequately address and test the logistics of returning operations back to the primary control room?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 5.6.2 (and 4.13.2)

5.6.2. If the SCADA system is still functional but there is a failure of the physical MDUG CR, MDUG GC will notify MDUG GC Supervision. MDUG GC Supervision will make the decision to either transfer MDUG GC responsibilities to the Backup CR or notify the CXT. In the event that the Backup CR is not activated within four (4) hours, CXT will notify the appropriate MDUG personnel to begin monitoring of their respective distribution systems. MDUG personnel will check SCADA gate station pressures, line heaters, and odorizers every four (4) hours and contact MDUG GC if levels are abnormal.

4.13.2. Transfer of responsibilities to or from the Backup CR will be done over the telephone when applicable. If the same controller is moving from the main CR to the backup or vice versa, no turnover is required. In addition to the turnover sheet, the MDUG GC will fill out the Backup CR Startup checklist (CR-1 Attachment 22).

59. Question Result, ID, References   Sat, CR.SCADA.BACKUPSCADAFUNCTIONS.R, 192.631(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 88961 (75)

Result Notes The 2021-2023 Walla Walla backup test log sheet was reviewed.

60. Question Result, ID, References   Sat, CR.CRMFM.FATIGUEMITIGATION.P, 192.631(d)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 6.5.2.1

6.5.2. MDUG GC task specific fatigue consideration

6.5.2.1. Monotonous, repetitive, or highly intensive tasks can help contribute to fatigue. Consideration is given to limit these types of tasks, specifically during night shifts where fatigue risks are the greatest. Typically, the night shifts main tasks consist of general system monitoring and low-intensity reporting duties.

6.5.3. Fatigued MDUG GC Accommodations

6.5.3.1. All MDUG GC and their Supervisor are trained to recognize signs of fatigue with themselves and in others. MDUG has developed a strong culture of safety and encourages MDUG GC to not risk

Report Filters: Results: all

endangerment by allowing themselves or others to work the control desk or operate vehicles while fatigued. For MDUG GC ending a shift feeling fatigued or facing driving conditions in extreme weather, MDUG will provide nearby hotel accommodations or taxi service to help ensure both the MDUG GC and the public's safety.

6.5.3.2. MDUG GC who feel overly fatigued during their shift or recognize co-workers showing signs of fatigue or are otherwise unfit for duty are required to notify MDUG Gas Control Management immediately. After consulting the work schedule, a replacement MDUG GC will be brought in as soon as possible.

6.5.3.3. The replacement MDUG GC will be identified, reviewed, and approved by the MDUG Gas Control Management Team.

61. Question Result, ID, References	Sat, CR.CRMFM.FATIGUERISKS.P, 192.631(d)
Question Text	*Does the fatigue mitigation plan adequately address how the program reduces the risk associated with controller fatigue?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 beginning at Step 6 addresses Fatigue Mitigation

Step 6.2.4 - 192.631 (d)(1)

Step 6.4.1 – 192.631(d)(2)(3)

Step 6.3.2 & 6.3.3 – 192.631(d)(4)

6. FATIGUE MITIGATION

6.1. The Supervisor, Gas Control is responsible for Fatigue Management and the Fatigue Management Plan.

6.2. Shift Lengths and Schedule Rotation

6.2.1. The MDUG CR operates with at least one (1) MDUG GC scheduled on shift at all times. A rotating 12 hour modified "Dupont" schedule is utilized with six (6) qualified MDUG GC.

6.2.2. MDUG GC on duty are scheduled to work no more than four (4) consecutive shifts and have a minimum of 47.5 hours off between their work weeks.

6.2.3. The MDUG CR work week is defined as Monday through Sunday. Each person with control desk responsibilities is scheduled to work three (3), 12-hour shifts per work week.

6.2.4. An additional half hour is assumed for each shift to allow for a normal shift turnover. Each MDUG GC has a commute time of less than 30 minutes each way. Thus, each MDUG GC on duty typically works 37.5 hours per week and is afforded ample opportunity to achieve a continuous 8 hours of sleep plus personal time between shifts.

62. Question Result, ID, References	Sat, CR.CRMFM.FATIGUEQUANTIFY.P, 192.631(d)
Question Text	*Do processes require that the potential contribution of controller fatigue to incidents and accidents be quantified during investigations?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 Steps 9.1 and 9.1.1

9. OPERATING EXPERIENCE

9.1. The MDUG Gas Control Management Team will review any significant incidents to determine if MDUG CR actions contributed to the incident. These incidents may include:

9.1.1. Controller Fatigue.

63. Question Result, ID, References Sat, CR.CRMFM.FATIGUEMANAGER.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 6.1 and 6.3.3

6. FATIGUE MITIGATION

6.1. The Supervisor, Gas Control is responsible for Fatigue Management and the Fatigue Management Plan.

6.3.3. Any deviation to the above limitations will only occur for the safe operation of a pipeline facility and require the pre-approval of MDUG Gas Control Management. Deviations will be documented using the Deviation Form in CR-01. Supervisor, Gas Control, or designee, shall complete the Monthly Deviation Report – Includes HOS Deviations form.

(To reiterate - The Form CR-01 is in the JIRA application now.)

64. Question Result, ID, References Sat, CR.CRMFM.SHIFTLENGTH.R, 192.631(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 88961 (75)

Result Notes The shift length is =<12hours.

65. Question Result, ID, References Sat, CR.CRMFM.SHIFTLENGTHTIME.R, 192.631(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 88961 (75)

Result Notes Reviewed Shift logs - Timesheet A person does 8 hour shifts Monday through Friday. The controllers typically work 12 hours and all are located within a short driving distance to the CR.

66. Question Result, ID, References Sat, CR.CRMFM.SCHEDULEDTIMEOFF.R, 192.631(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 88961 (75)

Result Notes Yes, Time records reviewed demonstrated that those scheduled for the 12 hour shifts have the opportunity to achieve at least 8 hrs sleep not including commute time.

67. Question Result, ID, References Sat, CR.CRMFM.ONCALLCONTROLLER.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 6.2 – 6.2.4

6.2. Shift Lengths and Schedule Rotation

6.2.1. The MDUG CR operates with at least one (1) MDUG GC scheduled on shift at all times. A rotating 12 hour modified "Dupont" schedule is utilized with six (6) qualified MDUG GC.

Report Filters: Results: all

6.2.2. MDUG GC on duty are scheduled to work no more than four (4) consecutive shifts and have a minimum of 47.5 hours off between their work weeks.

6.2.3. The MDUG CR work week is defined as Monday through Sunday. Each person with control desk responsibilities is scheduled to work three (3), 12-hour shifts per work week.

6.2.4. An additional half hour is assumed for each shift to allow for a normal shift turnover. Each MDUG GC has a commute time of less than 30 minutes each way. Thus, each MDUG GC on duty typically works 37.5 hours per week and is afforded ample opportunity to achieve a continuous 8 hours of sleep plus personal time between shifts.

CR-01 Attachment 15 - SCIENTIFIC SUPPORT FOR GAS PIPELINE CONTROL ROOM OPERATIONS' HOURS OF WORK AND REST REPORT (066. Scheduled Time Off Between Shifts - Folder in provided docs from operator and was reviewed.

68. Question Result, ID, References   Sat, CR.CRMFM.ONCALLCONTROLLER.R, 192.631(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   88961 (75)

Result Notes   Time cards reviewed. ("65-67.pdf")

69. Question Result, ID, References   Sat, CR.CRMFM.MAXHOS.P, 192.631(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 a reduction of the risk associated with controller fatigue?*

Assets Covered   88961 (75)

Result Notes   Per the operator: OPS 631 Step 6.3.2.1

6.3.2. All MDUG GC will work under the following hours of service limitations:

6.3.2.1. An "on desk" work week shall not exceed 63 hours. If for any reason a 63-hour work week is reached, a minimum of 34 hours off will be required.

70. Question Result, ID, References   Sat, CR.CRMFM.MINTIMEOFF.P, 192.631(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   88961 (75)

Result Notes   Per the operator: OPS 631 Step 6.3.2.1

6.3.2. All MDUG GC will work under the following hours of service limitations:

6.3.2.1. An "on desk" work week shall not exceed 63 hours. If for any reason a 63-hour work week is reached, a minimum of 34 hours off will be required.

71. Question Result, ID, References   Sat, CR.CRMFM.DOCSCHEDULE.P, 192.631(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   88961 (75)

Result Notes   Per the operator: OPS 631 Step 6.3.3

6.3.3. Any deviation to the above limitations will only occur for the safe operation of a pipeline facility and require the pre-approval of MDUG Gas Control Management. Deviations will be documented using the Deviation Form in CR-01. Supervisor, Gas Control, or designee, shall complete the Monthly Deviation Report – Includes HOS Deviations form.

72. Question Result, ID, References   NA, CR.CRMFM.DAYSOFF.P, 192.631(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 88961 (75)

Result Notes Per the operator: N/A CR operates 24/7 with 12-hour shifts

**CR is not a "normal" 5 day a week operation as it pertains in FAQ D.06.

The control room is open 24/7 with typical shifts being 12 hours.

73. Question Result, ID, References NA, CR.CRMFM.WORKHOURS.R, 192.631(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 88961 (75)

Result Notes It is a 24 hour operation.

74. Question Result, ID, References Sat, CR.CRMFM.FATIGUECOUNTERMEASURES.P, 192.631(d)(4)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 beginning at Step 6.5 describes Fatigue Mitigation Strategies.

**Applies to all shifts, nothing specific for 8hr shift.

6.5. Fatigue Mitigation Strategies

6.5.1. MDUG Primary CR Design

6.5.1.1. The MDUG GC work area plays an important role in fatigue mitigation. To help limit any negative impacts to MDUG GC fatigue, the following mitigation strategies have been taken:

6.5.1.2. Environmental

6.5.1.2.1. MDUG GC can adjust heating and cooling in the MDUG CR.

6.5.1.2.2. The MDUG CR has fully adjustable overhead lighting. In addition, each workstation also has adjustable LED task lighting.

6.5.1.3. Ergonomics

6.5.1.3.1. Workstations are height adjustable allowing for MDUG GC sit/stand functionality.

6.5.1.3.2. The MDUG GC have fully adjustable seating rated for 24/7 use.

6.5.1.3.3. SCADA displays are created under API 1165 compliance with consideration to limiting factors that can contribute to eye strain and fatigue.

6.5.1.4. Exercise Equipment

6.5.1.4.1. Light exercise is encouraged in the MDUG CR to help limit fatigue. Portable exercise equipment is provided and allows MDUG GC to utilize at their workstation.

6.5.1.5. Facilities

6.5.1.5.1. The MDUG CR is a secured department and designed to limit traffic flow and unnecessary distractions.

Report Filters: Results: all

6.5.1.5.2. A fully equipped kitchen is integrated into the MDUG CR and allows for audible alarm monitoring. This includes company supplied coffee and tea for tactical caffeine use to help limit fatigue effects.

6.5.1.5.3. Dedicated restroom facilities are located within 20 feet of the control desk which helps limit possible distractions and time away from desk.

6.5.1.5.4. A large high-definition television with cable service and Blue Ray player are provided.

75. Question Result, ID, References	Sat, CR.CRMFM.DAILYHOSLIMIT.P, 192.631(d)(4)
Question Text	*Do processes limit the daily maximum HOS limit no more than 14 hours in any sliding 24-hour period?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 Step 6.3.2.2

6.3.2.2. A workday shall not exceed 14 hours. An MDUG GC will not work more than two (2) 14-hour days in a work week, nor will they work more than 14 hours in a sliding 24-hour period.

76. Question Result, ID, References	Sat, CR.CRMFM.CONTROLLERNUMBERS.O, 192.631(d)
Question Text	*Do operations include a sufficient number of qualified controllers?*
Assets Covered	88961 (75)
Result Notes	Yes. There is not excessive HOS.

77. Question Result, ID, References	Sat, CR.CRMFM.OFFDUTYHOURS.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 6.2.2 and 6.3.2.1

6.2.2. MDUG GC on duty are scheduled to work no more than four (4) consecutive shifts and have a minimum of 47.5 hours off between their work weeks.

6.3.2. All MDUG GC will work under the following hours of service limitations:

6.3.2.1. An "on desk" work week shall not exceed 63 hours. If for any reason a 63-hour work week is reached, a minimum of 34 hours off will be required.

78. Question Result, ID, References	Sat, CR.CRMFM.SHIFTHOLDOVER.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 4.13.1 and 6.3.2.2

4.13.1. At the beginning of each shift or transfer of responsibilities, the incoming shift receives a briefing on current operations and activities that occurred during the previous shift. The MDUG Gas Control Management Team has allotted 30 minutes for shift turnover. These 30 minutes are part of the MDUG GC normal shift.

6.3.2.2. A workday shall not exceed 14 hours. An MDUG GC will not work more than two (2) 14-hour days in a work week, nor will they work more than 14 hours in a sliding 24-hour period.

79. Question Result, ID, References	Sat, CR.CRMFM.SPECIFICCOUNTERMEASURES.P, 192.631(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?*

Report Filters: Results: all

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 6.5.2.1

6.5.2. MDUG GC task specific fatigue consideration

6.5.2.1. Monotonous, repetitive, or highly intensive tasks can help contribute to fatigue. Consideration is given to limit these types of tasks, specifically during night shifts where fatigue risks are the greatest. Typically, the night shifts main tasks consist of general system monitoring and low-intensity reporting duties.

80. Question Result, ID, References Sat, CR.CRMFM.HOSDEVIATIONS.P, 192.631(d)(4)

Question Text *Is there a formal process for approving deviations from the maximum HOS limits?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 6.3.3

6.3.3. Any deviation to the above limitations will only occur for the safe operation of a pipeline facility and require the pre-approval of MDUG Gas Control Management. Deviations will be documented using the Deviation Form in CR-01. Supervisor, Gas Control, or designee, shall complete the Monthly Deviation Report – Includes HOS Deviations form.

81. Question Result, ID, References Sat, CR.CRMFM.FATIGUEEDUCATE.P, 192.631(d)(2) (192.631(d)(3))

Question Text *Does the program require that fatigue education/training is required for all controllers and control room supervisors?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 6.4.1

6.4. Controller Fatigue Education and Training

6.4.1. MDUG GC and their Supervisor will receive training on understanding fatigue mitigation strategies and how their actions both on and off work can affect fatigue. All MDUG GC and their Supervisor are trained to recognize signs of fatigue with themselves and in others. Additional written materials and ongoing education in the form of monthly newsletters geared specifically to shift workers from Circadian Technologies are available. All fatigue training and educational materials will be kept and made available to the MDUG GC in the Fatigue Management Training Binder.

82. Question Result, ID, References Sat, CR.CRMFM.FATIGUEEDUCATE.R, 192.631(d)(2) (192.631(d)(3))

Question Text *Is fatigue education/training documented for all controllers and control room supervisors?*

Assets Covered 88961 (75)

Result Notes Yes, Training and newsletters were reviewed for the last 3 years.

83. Question Result, ID, References Sat, CR.CRMFM.FATIGUEREVIEW.P, 192.631(d)(2) (192.631(d)(3), 192.605(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 3 and 10.1

3. THE MDUG GAS CONTROL MANAGEMENT TEAM WILL REVIEW EACH SECTION ANNUALLY (NOT TO EXCEED 15 MONTHS).

3.1. Alarm Management (Section 7) will be reviewed for effectiveness. The review of this section will be documented in the change/review log for alarm management effectiveness.

3.2. The review of all other sections will be documented in the change/review log for the CR Management.

10. TRAINING

Report Filters: Results: all

10.1. The MDUG GC training curriculum consists of a Gas Control Manual, Energy WorldNet online training, MDUG CR Management Plan, Safety Training, and other company & MDUG policies and procedures. At least once each calendar year, not to exceed 15 months, the MDUG Gas Control Management Team will review the Gas Control training program to ensure it meets current Gas Control training needs and Company & MDUG policies and procedures. Improvements and updates to the Gas Control training program are implemented as necessary to ensure the program meets Gas Control's training requirements.

84. Question Result, ID, References	Sat, CR.CRMFM.FATIGUESTRATEGY.P, 192.631(d)(2)
Question Text	*Does fatigue education address fatigue mitigation strategies (countermeasures)?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 Step 6.4.1

Step 6.5 Fatigue Mitigation Strategies

6.4. Controller Fatigue Education and Training

6.4.1. MDUG GC and their Supervisor will receive training on understanding fatigue mitigation strategies and how their actions both on and off work can affect fatigue. All MDUG GC and their Supervisor are trained to recognize signs of fatigue with themselves and in others. Additional written materials and ongoing education in the form of monthly newsletters geared specifically to shift workers from Circadian Technologies are available. All fatigue training and educational materials will be kept and made available to the MDUG GC in the Fatigue Management Training Binder.

6.5. Fatigue Mitigation Strategies

6.5.1. MDUG Primary CR Design

6.5.1.1. The MDUG GC work area plays an important role in fatigue mitigation. To help limit any negative impacts to MDUG GC fatigue, the following mitigation strategies have been taken:

6.5.1.2. Environmental

6.5.1.2.1. MDUG GC can adjust heating and cooling in the MDUG CR.

6.5.1.2.2. The MDUG CR has fully adjustable overhead lighting. In addition, each workstation also has adjustable LED task lighting.

6.5.1.3. Ergonomics

6.5.1.3.1. Workstations are height adjustable allowing for MDUG GC sit/stand functionality.

6.5.1.3.2. The MDUG GC have fully adjustable seating rated for 24/7 use.

6.5.1.3.3. SCADA displays are created under API 1165 compliance with consideration to limiting factors that can contribute to eye strain and fatigue.

6.5.1.4. Exercise Equipment

6.5.1.4.1. Light exercise is encouraged in the MDUG CR to help limit fatigue. Portable exercise equipment is provided and allows MDUG GC to utilize at their workstation.

6.5.1.5. Facilities

6.5.1.5.1. The MDUG CR is a secured department and designed to limit traffic flow and unnecessary distractions.

Report Filters: Results: all

6.5.1.5.2. A fully equipped kitchen is integrated into the MDUG CR and allows for audible alarm monitoring. This includes company supplied coffee and tea for tactical caffeine use to help limit fatigue effects.

6.5.1.5.3. Dedicated restroom facilities are located within 20 feet of the control desk which helps limit possible distractions and time away from desk.

6.5.1.5.4. A large high-definition television with cable service and Blue Ray player are provided.

85. Question Result, ID, References	Sat, CR.CRMFM.OFFDUTY.P, 192.631(d)(2)
Question Text	*Does fatigue education address how off-duty activities contribute to fatigue?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 Step 6.4.1

6.4.1. MDUG GC and their Supervisor will receive training on understanding fatigue mitigation strategies and how their actions both on and off work can affect fatigue. All MDUG GC and their Supervisor are trained to recognize signs of fatigue with themselves and in others. Additional written materials and ongoing education in the form of monthly newsletters geared specifically to shift workers from Circadian Technologies are available. All fatigue training and educational materials will be kept and made available to the MDUG GC in the Fatigue Management Training Binder.

86. Question Result, ID, References	Sat, CR.CRMFM.FATIGUECONTENT.P, 192.631(d)(3)
Question Text	*Is the content of fatigue training adequate for training controllers and supervisors to recognize the effects of fatigue?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 Step 6.4.1

6.4. Controller Fatigue Education and Training

6.4.1. MDUG GC and their Supervisor will receive training on understanding fatigue mitigation strategies and how their actions both on and off work can affect fatigue. All MDUG GC and their Supervisor are trained to recognize signs of fatigue with themselves and in others. Additional written materials and ongoing education in the form of monthly newsletters geared specifically to shift workers from Circadian Technologies are available. All fatigue training and educational materials will be kept and made available to the MDUG GC in the Fatigue Management Training Binder.

87. Question Result, ID, References	Sat, CR.CRMFM.FATIGUECONTENT.R, 192.631(d)(3)
Question Text	*Has controller and supervisor training to recognize the effects of fatigue been documented?*
Assets Covered	88961 (75)
Result Notes	2021 - 2023 Fatigue Training Certs were reviewed.

88. Question Result, ID, References	Sat, CR.CRMAM.ALARM.P, 192.631(e)
Question Text	*Is the alarm management plan a formal process that specifically identifies critical topical areas included in the program?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 beginning at Step 7 - alarm management

**7.2.2.1 Critical/safety related alarms are considered abnormal operating conditions and require immediate response by the MDUG GC

Alarm philosophy

7.2. Alarm and Alert Definitions and Determinations

Alarm identification

7.3. Alarm Rationalization and Documentation

Alarm rationalization, not necessarily alarm reduction.

7.4. Set Points

Detailed design

7.5. Alarm Information and Records

7.6. Alert Information and Records

7.8. Stale or Unreliable Data

Implementation

7.7. Alarm Roles and Responsibilities

Operation

7.9. Alarm/Alert Handling

Maintenance

7.10. Alarm Audits and Performance Monitoring

Monitoring

7.11. Activity Review

Assessment (including a method to confirm effective controller response)

7.12. Management of Change

7.10. Alarm Audits and Performance Monitoring

Internal audits

89. Question Result, ID, References	Sat, CR.CRMAM.ALARMMALFUNCTION.P, 192.631(e)(1)
Question Text	*Is there a process to identify and correct inaccurate or malfunctioning alarms?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 Step 7.3.3

7.3.3. False and nuisance alarms will be corrected immediately and will be documented using the Control Room False Alarm Form. (Refer to CR-01 located in the MDUG CR.)

90. Question Result, ID, References	Sat, CR.CRMAM.ALARMREVIEW.P, 192.631(e)(1)
Question Text	*Does the review of safety-related alarms account for different alarm designs and all alarm types/priorities?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 Step 7.2.1

7.2. Alarm and Alert Definitions and Determinations

7.2.1. SCADA alarms and alerts will be developed for situations that either require a response by the MDUG GC (alarm) or just notification to the MDUG GC (alert). MDUG CR will determine appropriate alerts,

Report Filters: Results: all

while the Engineering Services Department will determine appropriate alarms, both based on the following criteria:

7.2.1.1. Alarm - MDUG GC action is required.

7.2.1.2. Alert - MDUG GC Heighten Awareness.

7.2.1.3. Alarm and/or alert is clear, meaningful, and relevant to the MDUG GC responsibilities.

7.2.1.4. The alarm and/or alert has a defined response.

7.2.1.5. The alarm and/or alert is consistent with other system configurations.

91. Question Result, ID, References	NA, CR.CRMAM.CONTROLLERPERFORMANCE.P, 192.631(h) (192.631(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	88961 (75)
Result Notes	No such relevant facilities/equipment existed in the scope of inspection review.
	Per the operator: N/A – There are no differences in display object characteristics, formats, or colors from one console to another

92. Question Result, ID, References	Sat, CR.CRMAM.STALEDATA.P, 192.631(e)(1)
Question Text	*Does the review of safety-related alarms include specific procedures and practices for managing stale or unreliable data?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 Step 7.8.1
	This was verified in a operator's previous compliance finding response and also reviewed in the procedural manual.

93. Question Result, ID, References	Sat, CR.CRMAM.MONTHLYANALYSIS.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 7.10.1
	7.10. Alarm Audits and Performance Monitoring
	7.10.1. The MDUG Gas Control Management Team will ensure a regular review and audit of alarms, alerts, volume of alarm/alerts, and system performance is completed per the following schedule. Frequency, volume, and any deficiencies will be identified, documented and corrective actions taken. Points affecting safety include false, nuisance, and inhibited alarms and points taken off scan or have had forced or manual values. An acceptable average rate of alarms shall be less than one (1) every 10 minutes (see references EEMUA Publication 191: A Guide to Design, Management and Procurement located in the MDUG CR).

94. Question Result, ID, References	Sat, CR.CRMAM.PROBLEMCORRECTION.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 7.3.3 and 7.9.1
	Table under Step 7.10 addresses 192.631(e)(2)

Report Filters: Results: all

7.3.3. False and nuisance alarms will be corrected immediately and will be documented using the Control Room False Alarm Form. (Refer to CR-01 located in the MDUG CR.)

7.9. Alarm/Alert Handling

7.9.1. False alarms/alerts will be documented in the Operator Gas Log and will include documentation of any contact made with Field Operations personnel; as well as, an explanation of why the MDUG GC feels the alarm/alert is not representative of actual conditions in the field. False alarms/alerts will be communicated to the MDUG Gas Control Manager or Gas Control Supervisor for follow up investigation and reporting.

95. Question Result, ID, References Sat, CR.CRMAM.ALARMVERIFY.R, 192.631(e)(2)

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

Assets Covered 88961 (75)

Result Notes Several records were provided by the operator. I selected additional records for review. I viewed the master folder and also April 2021.

96. Question Result, ID, References Sat, CR.CRMAM.ALARMSETPOINTS.P, 192.631(e)(3)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 7.4.1

Table under Step 7.10 addresses 192.631(e)(3)

7.4. Set Points

7.4.1. Alarm set points (e.g., HiHi/LoLo) are set at a level which requires immediate response from the MDUG GC. Alarm set points will be determined and set by the MDUG's Engineering Services Department.

97. Question Result, ID, References Sat, CR.CRMAM.SETTINGCONTROL.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 7.5.3

*Step 7.12.1 describes MOC

7.12. Management of Change

7.12.1. The MDUG Gas Control Manager and/or Gas Control Supervisor will be consulted prior to the implementation of changes to the SCADA alarm system to coordinate system testing, document changes, and provide training for the MDUG GC to ensure the MDUG distribution systems are operated within safety parameters. Changes include SCADA system upgrades, screen depictions, alarm set points, Alarm descriptors, new monitoring locations, and removal of locations monitored. Changes affecting the SCADA system will be implemented by EIT SCADA Support and authorized by the MDUG Gas Control Management Team using the JIRA application.

98. Question Result, ID, References Sat, CR.CRMAM.ALARMVALUEVERIFY.R, 192.631(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 88961 (75)

Result Notes Point to Point engineering reviews were selected during the records portion. Email confirmations of completion by the engineering department were also provided by the operator.

99. Question Result, ID, References Sat, CR.CRMAM.PLANREVIEW.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 7.10.1 (frequency document in table under 7.10.1)

REVIEW	FREQUENCY
Review alarm/alert volume and frequency	Monthly
(See CR-01 Attachment 13)	Gas Control Management Team Responsibility
Review alarm management plan	Each calendar year (not to exceed 15 months)
(Section 7)	Gas Control Management Team Responsibility
	Each calendar year (not to exceed 15 months)
Verify proper critical alarm set points and descriptions.	
	Engineering Services Department Responsibility
Review Points Affecting Safety	Monthly
(See CR-01 Control Room False Alarm Form)	Gas Control Management Team Responsibility

100. Question Result, ID, References Sat, CR.CRMAM.PLANREVIEW.R, 192.631(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 88961 (75)

Result Notes 100 Alarm change log.pdf was reviewed for entries covering 2021-2023. It was completed on time for each of those years.

101. Question Result, ID, References Sat, CR.CRMAM.WORKLOAD.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 7.11.1 – Workload study is conducted annually by the control room.

7.11. Activity Review

7.11.1. The MDUG Gas Control Management Team is to conduct a CR Workload Study for the MDUG CR located in Kennewick, Washington. The study is used by the MDUG Gas Control Management Team to ensure MDUG GC have sufficient time to analyze and react to all SCADA alarms and alerts. The MDUG Gas Control Management Team considers the annual Workload Study to evaluate and determine responsibilities for MDUG GC on duty and the staffing level of the MDUG CR. The Workload Study includes the following:

7.11.1.1. Level of activity for MDUG GC on duty during the day shift.

7.11.1.2. Identify difference in level of activity for day shift and night shift.

7.11.1.3. Length of time responding to alarms.

7.11.1.4. Training activities on shift.

7.11.1.5. Set point changes per shift for MDUG GC on duty.

7.11.1.6. Average duration of phone calls per shift.

7.11.1.7. Internal and external customer interactions.

7.11.1.8. Increased actives resulting from abnormal operating conditions.

Report Filters: Results: all

7.11.1.9. Personnel interviews to identify performance issues related to analyzing and reacting to alarms.

102. Question Result, ID, References Sat, CR.CRMAM.WORKLOADMONITORING.P, 192.631(e)(5)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 7.11.1.1 thru 7.11.1.9

7.11.1.1. Level of activity for MDUG GC on duty during the day shift.

7.11.1.2. Identify difference in level of activity for day shift and night shift.

7.11.1.3. Length of time responding to alarms.

7.11.1.4. Training activities on shift.

7.11.1.5. Set point changes per shift for MDUG GC on duty.

7.11.1.6. Average duration of phone calls per shift.

7.11.1.7. Internal and external customer interactions.

7.11.1.8. Increased actives resulting from abnormal operating conditions.

7.11.1.9. Personnel interviews to identify performance issues related to analyzing and reacting to alarms.

103. Question Result, ID, References Sat, CR.CRMAM.CONTROLLERREACTION.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 7.11.1

7.11. Activity Review

7.11.1. The MDUG Gas Control Management Team is to conduct a CR Workload Study for the MDUG CR located in Kennewick, Washington. The study is used by the MDUG Gas Control Management Team to ensure MDUG GC have sufficient time to analyze and react to all SCADA alarms and alerts.

104. Question Result, ID, References Sat, CR.CRMAM.PERFORMANCEANALYSIS.R, 192.631(e)(5)

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

Assets Covered 88961 (75)

Result Notes 2021-2022 were reviewed during the MS-Teams portion. 2023 was provided and reviewed prior.

105. Question Result, ID, References Sat, CR.CRMAM.DEFICIENCIES.P, 192.631(e)(6)

Question Text *Is there a process to address how deficiencies found in implementing 192.631(e)(1) through 192.631(e)(5) will be resolved?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 7.9.1 and 7.10.1

7.9. Alarm/Alert Handling

7.9.1. False alarms/alerts will be documented in the Operator Gas Log and will include documentation of any contact made with Field Operations personnel; as well as, an explanation of why the MDUG GC feels the alarm/alert is not representative of actual conditions in the field. False alarms/alerts will be communicated to the MDUG Gas Control Manager or Gas Control Supervisor for follow up investigation and reporting.

7.10. Alarm Audits and Performance Monitoring

7.10.1. The MDUG Gas Control Management Team will ensure a regular review and audit of alarms, alerts, volume of alarm/alerts, and system performance is completed per the following schedule. Frequency, volume, and any deficiencies will be identified, documented and corrective actions taken. Points affecting safety include false, nuisance, and inhibited alarms and points taken off scan or have had forced or manual values. An acceptable average rate of alarms shall be less than one (1) every 10 minutes (see references EEMUA Publication 191: A Guide to Design, Management and Procurement located in the MDUG CR).

106. Question Result, ID, References NA, CR.CRMAM.DEFICIENCIES.R, 192.631(e)(6)

Question Text *Do records indicate deficiencies found in implementing 192.631(e)(1) through 192.631(e)(5) have been resolved?*

Assets Covered 88961 (75)

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

107. Question Result, ID, References Sat, CR.CRMCMGT.EQUIPMENTCHANGES.P, 192.631(f)(1)

Question Text *Is there a process to assure changes in field equipment that could affect control room operations are coordinated with the control room personnel?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 8.3.1

8.3. MDUG Field Operations Personnel

8.3.1. MDUG Field Operations personnel are required to contact the MDUG CR whenever there are abnormal or emergency conditions affecting MDUG's distribution system. In addition, all Field Operations personnel are to contact the MDUG CR of any changes that will affect field equipment monitored by the MDUG CR.

108. Question Result, ID, References Sat, CR.CRMCMGT.CONTROLLERPARTICIPATE.P, 192.631(f)(1) (192.631(f)(3))

Question Text *Are control room representative(s) required to participate in meetings where changes that could directly or indirectly affect the hydraulic performance or configuration of the pipeline (including routine maintenance and repairs) are being considered, designed and implemented?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 8.1.2 and 8.2.1

8.1.2. The MDUG CR is notified of Engineering Projects per OPS 205 – Engineering Project Process. MDUG CR shall review the Engineering Project for impact to MDUG GC responsibilities.

8.2.1. The MOC process ensures all parties involved or impacted by the change are consulted prior to implementation to ensure that all risks associated with the change are identified, assessed, and managed. When recommended changes affect the distribution system, the MDUG CR is notified of the change during the early stages of the process and their approval may be required during each of the following phases:

8.2.1.1. Any Training needs.

8.2.1.2. Approval for Startup.

8.2.1.3. Approval for Modification.

8.2.1.4. Work Completed.

109. Question Result, ID, References Sat, CR.CRMCMGT.CONTROLLERPARTICIPATE.R, 192.631(f)(1) (192.631(f)(3))

Question Text *Do records indicate that control room representative(s) participate in meetings where changes that could directly or indirectly affect the hydraulic performance or configuration of the pipeline (including routine maintenance and repairs) are being considered, designed and implemented?*

Assets Covered 88961 (75)

Report Filters: Results: all

Result Notes	2023 and 2024 SCADA Meeting was reviewed. The 9-14-22 meeting was also reviewed. For 2021, 11-10-2021 is the date the meeting was held.
110. Question Result, ID, References	Sat, CR.CRMCMGT.EMERGENCYCONTACT.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 8.3.1 and Step 8.4.11

8.3. MDUG Field Operations Personnel

8.3.1. MDUG Field Operations personnel are required to contact the MDUG CR whenever there are abnormal or emergency conditions affecting MDUG's distribution system. In addition, all Field Operations personnel are to contact the MDUG CR of any changes that will affect field equipment monitored by the MDUG CR.

8.4.11. If communication is available, Field Operations personnel will contact the pipeline's Gas Control Department through the MDUG CR to notify them of emergency and receive direction on equipment operation.

111. Question Result, ID, References	Sat, CR.CRMCMGT.FIELDCONTACT.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 8.3.1

8.3.1. MDUG Field Operations personnel are required to contact the MDUG CR whenever there are abnormal or emergency conditions affecting MDUG's distribution system. In addition, all Field Operations personnel are to contact the MDUG CR of any changes that will affect field equipment monitored by the MDUG CR.

112. Question Result, ID, References	Sat, CR.CRMCMGT.FIELDCHANGES.R, 192.631(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	88961 (75)
Result Notes	A record randomly selected for 3/14/-3/15/2021 was reviewed and had sufficient detail.

113. Question Result, ID, References	Sat, CR.CRMEXP.REPORTABLEINCIDENTREVIEW.P, 192.631(g)(1)
Question Text	*Is there a formal, structured approach for reviewing and critiquing reportable events to identify lessons learned?*
Assets Covered	88961 (75)
Result Notes	Per the operator: OPS 631 in Step 9 Operating Experience (describes incident reviews and lessons learned)

9. OPERATING EXPERIENCE

9.1. The MDUG Gas Control Management Team will review any significant incidents to determine if MDUG CR actions contributed to the incident. These incidents may include:

9.1.1. Controller Fatigue.

9.1.2. Field Equipment Failure.

9.1.3. Incorrect Procedures.

9.1.4. SCADA system configuration issues.

Report Filters: Results: all

9.1.5. SCADA system performance issues.

114. Question Result, ID, References	NA, CR.CRMEXP.REPORTABLEINCIDENTREVIEW.R, 192.631(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	88961 (75)
Result Notes	No such event occurred, or condition existed, in the scope of inspection review.
	No records provided. N/A when discussed during meeting

115. Question Result, ID, References	Sat, CR.CRMEXP.LESSONSLEARNED.P, 192.631(g)(2) (192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 9.2 – 9.4.4

9.2. Incident reviews shall be performed within 30 days of occurrence. Findings will be documented using the Lessons Learned Form. (Refer to CR-01 located in MDUG CR for required Lessons Learned form.)

9.3. The MDUG Gas Control Management Team provides Lessons Learned training to MDUG GC. This training can take place on an individual MDUG GC basis or as a group during a Gas Controller monthly meeting. (Refer to CR-01 located in MDUG CR for the Lessons Learned form.)

9.4. In addition to reportable incidents, Lessons Learned training may be required for other scenarios:

9.4.1. Near misses.

9.4.2. Abnormal operations.

9.4.3. Activities noted in Operator Gas Log.

9.4.4. Other incidents as determined by the MDUG Gas Control Management Team.

116. Question Result, ID, References	Sat, CR.CRMEXP.LESSONSLEARNED.R, 192.631(g)(2) (192.631(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	88961 (75)
Result Notes	An MAOP training record was provided and reviewed from 3/22/2023. No other lessons learned for 2021 or 2022.
	2015 and 2019 were the most recent review trainings before that but were not a part of this inspection time frame.

117. Question Result, ID, References	Sat, CR.CRMTRAIN.CONTROLLERTRAIN.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 10.1

10. TRAINING

10.1. The MDUG GC training curriculum consists of a Gas Control Manual, Energy WorldNet online training, MDUG CR Management Plan, Safety Training, and other company & MDUG policies and procedures. At least once each calendar year, not to exceed 15 months, the MDUG Gas Control Management Team will review the Gas Control training program to ensure it meets current Gas Control training needs and Company & MDUG policies and procedures. Improvements and updates to the Gas

Control training program are implemented as necessary to ensure the program meets Gas Control's training requirements.

118. Question Result, ID, References	Sat, CR.CRMTRAIN.CONTROLLERTRAIN.R, 192.631(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	88961 (75)
Result Notes	OQ training curriculum was reviewed during the MS Teams meeting an was suitable.

119. Question Result, ID, References	Sat, CR.CRMTRAIN.TRAININGREVIEW.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 10.1

10. TRAINING

10.1. The MDUG GC training curriculum consists of a Gas Control Manual, Energy WorldNet online training, MDUG CR Management Plan, Safety Training, and other company & MDUG policies and procedures. At least once each calendar year, not to exceed 15 months, the MDUG Gas Control Management Team will review the Gas Control training program to ensure it meets current Gas Control training needs and Company & MDUG policies and procedures. Improvements and updates to the Gas Control training program are implemented as necessary to ensure the program meets Gas Control's training requirements.

120. Question Result, ID, References	Sat, CR.CRMTRAIN.TRAININGREVIEW.R, 192.631(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	88961 (75)
Result Notes	Records of change logs were provided and reviewed for 2021 to 2024.

121. Question Result, ID, References	Sat, CR.CRMTRAIN.TRAININGCONTENT.R, 192.631(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	88961 (75)
Result Notes	The training materials were provided and reviewed. They are suitable.

122. Question Result, ID, References	Sat, CR.CRMTRAIN.AOCLIST.R, 192.631(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	88961 (75)
Result Notes	Procedure and training review was provided and was suitable.

123. Question Result, ID, References	Sat, CR.CRMTRAIN.TRAININGABNORMAL.P, 192.631(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	88961 (75)
Result Notes	Per the operator: OPS 631 Step 10.2 – 10.4, 10.8

10.2. MDUG GC receive classroom and on-the- job training pertaining to their roles and responsibilities during normal, abnormal, and emergency operations. New MDUG GC will be assigned to work with experienced, qualified MDUG GC on shift during their training phase.

10.3. Classroom training includes an overview of the MDUG CR Management Plan and a Gas Control Manual, concentrating on the MDUG GC responsibility and authority to operate the system. MDUG GC

receive a thorough review of company policies and procedures that emphasize the controller's role, responsibility, and authority during normal, abnormal, and emergency operations.

10.4. On-the job training allows the MDUG GC to learn through observation, practice, and performing actual work tasks. On-the job training is an effective tool for training controllers to perform the tasks associated with normal, abnormal, and emergency operations and for training on a working knowledge of the distribution system.

10.8. Specific training exercises will include both controllers and Network Architect(s), SCADA System Analysts, and First Responders (e.g., Service Mechanics, Service Technicians) who respond to communication outages who would reasonably be expected to operationally collaborate with controllers during normal, abnormal, or emergency situations. Individuals will be selected based on the training exercise by the MDUG Gas Control Management Team. Company leadership and Executive management will be notified of the drills and will be involved in any after action reviews of the drills. Team training exercises will be performed every 24 months, not to exceed 30 months.

124. Question Result, ID, References NA, CR.CRMTRAIN.TRAINING.O, 192.631(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 88961 (75)

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

The operator performs table top training exercises, but none were occurring while I was on site.

125. Question Result, ID, References Sat, CR.CRMTRAIN.TRAINING.R, 192.631(h)(2)

Question Text *Do records indicate the training program used a simulator or tabletop exercises to train controllers how to recognize and respond to abnormal operating conditions?*

Assets Covered 88961 (75)

Result Notes Operator provided a copy of the training curriculum. No new employees in the last 6 years. No simulator. Table tops are conducted with actual alarms to train for response strategies.

126. Question Result, ID, References Sat, CR.CRMTRAIN.COMMUNICATIONTRAINING.P, 192.631(h)(3)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 10.3

10.3. Classroom training includes an overview of the MDUG CR Management Plan and a Gas Control Manual, concentrating on the MDUG GC responsibility and authority to operate the system. MDUG GC receive a thorough review of company policies and procedures that emphasize the controller's role, responsibility, and authority during normal, abnormal, and emergency operations.

127. Question Result, ID, References Sat, CR.CRMTRAIN.SYSKNOWLEDGE.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Steps 10.5 – 10.8

10.5. New MDUG GC receive knowledge-based training in basic natural gas distribution fundamentals and local distribution natural gas specific topics, as well as, mentoring by experienced MDUG GC and/or the MDUG Gas Control Management Team.

10.6. Knowledge-based training consists of classroom training conducted by an experienced, qualified subject matter expert. In addition to classroom training, MDUG GC engage in self-study training courses to build a solid foundation on the basic fundamentals of Gas Control. MDUG GC continue to build their knowledge through fundamental training as they transition to on-the-job training. Lesson plans have been developed for classroom training activities and are designed to document the topics covered during the training session. (Refer to the Gas Control Training Manual located in the MDUG CR.)

10.7. Performance-based or hands-on training consists of one-on-one training that exhibits demonstration, practice, and task performance under the guidance of an OQ-qualified MDUG GC or MDUG Gas Control Management personnel. MDUG Gas Control Management and/or MDUG Senior GC are qualified to conduct training by completing specific training courses identified in the MDUG Gas Control Training Curriculum document. The Gas Control Training Curriculum document has been developed for MDUG Gas Control training activities and is designed to document the task knowledge and performance requirements covered during the training session.

10.8. Specific training exercises will include both controllers and Network Architect(s), SCADA System Analysts, and First Responders (e.g., Service Mechanics, Service Technicians) who respond to communication outages who would reasonably be expected to operationally collaborate with controllers during normal, abnormal, or emergency situations. Individuals will be selected based on the training exercise by the MDUG Gas Control Management Team. Company leadership and Executive management will be notified of the drills and will be involved in any after action reviews of the drills. Team training exercises will be performed every 24 months, not to exceed 30 months.

128. Question Result, ID, References Sat, CR.CRMTRAIN.INFREQOPSLIST.R, 192.631(h)(5)

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

Assets Covered 88961 (75)

Result Notes The cold weather setup was provided and reviewed. It was suitable.

129. Question Result, ID, References Sat, CR.CRMTRAIN.INFREQOPSREVIEW.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 10.9

10.9. MDUG has periodically, but infrequently, used Cold Weather Action Plans for various districts in their distribution system. The MDUG Gas Control Management Team provides the opportunity and encourages MDUG GC to review the MDUG Cold Weather Action Plans that are located in CR-01. This review can take place on an individual MDUG GC basis or as a group during a GC monthly meeting.

130. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINPERSONNEL.P, 192.631(h)(6)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 10.8

10.8. Specific training exercises will include both controllers and Network Architect(s), SCADA System Analysts, and First Responders (e.g., Service Mechanics, Service Technicians) who respond to communication outages who would reasonably be expected to operationally collaborate with controllers during normal, abnormal, or emergency situations. Individuals will be selected based on the training exercise by the MDUG Gas Control Management Team. Company leadership and Executive management will be notified of the drills and will be involved in any after action reviews of the drills. Team training exercises will be performed every 24 months, not to exceed 30 months.

131. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINFREQ.P, 192.631(h)(6)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 10.8

10.8. Specific training exercises will include **both controllers and Network Architect(s), SCADA System Analysts, and First Responders (e.g., Service Mechanics, Service Technicians)** who respond to communication outages who would reasonably be expected to operationally collaborate with controllers during normal, abnormal, or emergency situations. Individuals will be selected based on the training exercise by the MDUG Gas Control Management Team. Company leadership and Executive management will be notified of the drills and will be involved in any after action reviews of the drills. Team training exercises will be performed every 24 months, not to exceed 30 months.

132. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINCOMPLETE.P, 192.631(h)(6)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 10.8

10.8. Specific training exercises will include both controllers and Network Architect(s), SCADA System Analysts, and First Responders (e.g., Service Mechanics, Service Technicians) who respond to communication outages who would reasonably be expected to operationally collaborate with controllers during normal, abnormal, or emergency situations. Individuals will be selected based on the training exercise by the MDUG Gas Control Management Team. Company leadership and Executive management will be notified of the drills and will be involved in any after action reviews of the drills. Team training exercises will be performed every 24 months, not to exceed 30 months.

133. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINEXPERIENCE.P, 192.631(h)(6)

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

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 9.3 and 9.4

9.3. The MDUG Gas Control Management Team provides Lessons Learned training to MDUG GC. This training can take place on an individual MDUG GC basis or as a group during a Gas Controller monthly meeting. (Refer to CR-01 located in MDUG CR for the Lessons Learned form.)

9.4. In addition to reportable incidents, Lessons Learned training may be required for other scenarios:

9.4.1. Near misses.

9.4.2. Abnormal operations.

9.4.3. Activities noted in Operator Gas Log.

9.4.4. Other incidents as determined by the MDUG Gas Control Management Team.

134. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINEXERCISE.R, 192.631(h)(6)

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

Assets Covered 88961 (75)

Result Notes The Gas Control - Loss of SCADA Communication Test Plan was reviewed. At least 1 controller was present at each training for 2021-2023.

135. Question Result, ID, References NA, CR.CRMTRAIN.TEAMTRAINEXERCISE.O, 192.631(h)(6)

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

Assets Covered 88961 (75)

Result Notes I was not at the site for any training. No such activity/condition was observed during the inspection.

136. Question Result, ID, References Sat, CR.CRMTRAIN.TEAMTRAINIDENTINDIVIDUAL.R, 192.631(h)(6)

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

Assets Covered 88961 (75)

Result Notes 2021- 2023 provided and reviewed. This is completed annually.

137. Question Result, ID, References Sat, CR.CRMCOMP.SUBMITPROCEDURES.P, 192.631(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 88961 (75)

Result Notes Per the operator: OPS 631 Step 11.1.1.1

11.1.1.1. The Policy & Procedure Department (P&P), in conjunction with Operations Services Manager(s) will act as the primary liaisons, coordinating and submitting MDUG CR Management procedures and associated records upon request to PHMSA, Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington, and Wyoming agencies for this MDUG CR Management Plan. All documents will be submitted within requested deadlines.

138. Question Result, ID, References Sat, CR.CRMCOMP.SUBMITPROCEDURES.R, 192.631(i)

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

Assets Covered 88961 (75)

Result Notes We have procedures submitted from last year.

139. Question Result, ID, References Sat, CR.CRMCOMP.CRMCOORDINATOR.R, 192.631(i)

Question Text *Is there an individual that is responsible and accountable for compliance with requests from PHMSA or other applicable agencies?*

Assets Covered 88961 (75)

Result Notes CNGC/MDU has a compliance department.

140. Question Result, ID, References Sat, CR.CRMCOMP.RECORDS.P, 192.631(j)(1)

Question Text *Are records management processes adequate to assure records are sufficient to demonstrate compliance with the CRM rule?*

Assets Covered 88961 (75)

Result Notes Per the operator: OPS 631 Step 11.1 – 11.1.3 addresses Records Mgmt.

11. COMPLIANCE VALIDATION

11.1. Records

11.1.1. MDUG GC will have and maintain records to demonstrate required activities are satisfactorily accomplished.

11.1.1.1. The Policy & Procedure Department (P&P), in conjunction with Operations Services Manager(s) will act as the primary liaisons, coordinating and submitting MDUG CR Management procedures and associated records upon request to PHMSA, Idaho, Minnesota, Montana, North Dakota, Oregon, South Dakota, Washington, and Wyoming agencies for this MDUG CR Management Plan. All documents will be submitted within requested deadlines.

11.1.2. All records and documents maintained by the MDUG CR will include sufficient details to demonstrate thoroughness and authenticity.

11.1.3. The MDUG Gas Control Management Team will retain all records related to Routine, Special, and Emergency Services for at least three (3) years or for any greater period as required by any regulatory authority having jurisdiction.

141. Question Result, ID, References Sat, CR.CRMCOMP.RECORDS.R, 192.631(j)(1)

Question Text *Are records sufficient to demonstrate compliance with the CRM rule?*

Assets Covered 88961 (75)

Result Notes Records were complete.

142. Question Result, ID, References Sat, CR.CRMCOMP.ELECTRONICRECORDS.R, 192.631(j)(1)

Question Text *Are electronic records properly stored, safeguarded, and readily retrievable?*

Assets Covered 88961 (75)

Result Notes Records were readily retrievable and they are backed up.

143. Question Result, ID, References Sat, CR.CRMCOMP.DEVIATIONS.P, 192.631(j)(2)

Report Filters: Results: all

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 88961 (75)

Result Notes Per the operator: OPS 631 Step 12.2 – 12.2.2.1

12.2. Deviations

12.2.1. MDUG GC will retain documents for the specified record retention requirements. All MDUG GC records will be maintained electronically and/or as a hard copy and will be accessible for inspection. Hard copies will be located in the MDUG CR.

12.2.2. The MDUG Gas Control Management Team will approve deviations to this company procedure, but only if the deviation provides for safe operations of the pipeline system(s) and meets the applicable federal or state pipeline safety regulations.

12.2.2.1. The Engineering Services Department may approve deviations to this company procedure, but only if the deviation provides for safe operations of the pipeline system(s) and meets the applicable federal or state pipeline safety regulations. Documentation of all deviations must be available, including applicable analysis, to support any approved deviation. (Refer to CR-01 located in MDUG CR for the Deviation form.) Completed forms must be maintained for at least three (3) years by the MDUG CR.

144. Question Result, ID, References Sat, CR.CRMCOMP.DEVIATIONS.R, 192.631(j)(2)

Question Text *Were all deviations documented in a way that demonstrates they were necessary for safe operation?*

Assets Covered 88961 (75)

Result Notes Deviations are available back to 2018 after the 2017 audit findings. 2021-2024 deviations were reviewed and there were no issues.

Report Filters: Results: all