

Results and Notes Review

CR.CRMGEN: General

Question ID, [CR.CRMGEN.CRMCRITERIA.P](#) , 192.631(a)(2)

References

Question Text *Does the process adequately address criteria by which the operator determines which of its facilities are control rooms?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 - Revision March 31, 2014 - Section 1.22.**

Question ID, [CR.CRMGEN.CRMMGMT.P](#) , 192.631(a)(2)

References

Question Text *Are CRM procedures formalized and controlled?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP930 - Revision March 31, 2014/Previous Revision March 29, 2013.**

Question ID, [CR.CRMGEN.CRMIMPLEMENT.R](#) , 192.631(a)(2)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Question ID, [CR.CRMGEN.CRMPROCLOCATION.O](#) , 192.631(a)(2)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Observed that procedures were in a Binder and available to operators.**

CR.CRMRR: Roles and Responsibilities

Question ID, [CR.CRMRR.RESPONSIBLE.P](#) , 192.631(b)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Section 2 - Roles and Responsibilities -Section 2.1.**

Question ID, [CR.CRMRR.QUALCONTROL.P](#) , 192.631(b)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 (Rev 3/31/14) Section 2.8**

Question ID, [CR.CRMRR.DOMAINCHANGE.P](#) , 192.631(b)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Section 2.5, Attachment #10 (Hard Copy in Manual)**

Question ID, [CR.CRMRR.AUTHORITYABNORMAL.P](#) , 192.631(b)(2)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 (Rev 3/31/14) Section 2.9 - Leadership Role, See attachment #8(in manual), Section 8.2 - Emergency Call List**

Question ID, [CR.CRMRR.RESPCHANGE.P](#) , 192.631(b)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/14 - Section 2.5.2**

Question ID, [CR.CRMRR.COMMANDVERIFY.P](#) , 192.631(b)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/14 - Section 2.5.2**

Question ID, [CR.CRMRR.PRESSLIMITS.O](#) , 192.631(b)(2) (192.619(a); 192.631(e)(1))

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Question ID, [CR.CRMRR.AUTHORITYEMERGENCY.P](#) , 192.631(b)(3)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/14 - Sections 2.10-2.11**

Question ID, [CR.CRMRR.EVACUATION.P](#) , 192.631(b)(3)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/14 - Section 3.6**

Question ID, [CR.CRMRR.COMMSYSFAIL.P](#) , 192.631(b)(3)

References

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?*

Result **Concern**

Assets Covered **CNG CRM**

Summary **CP 930 Rev 3/31/14 - Section 3.6.1, Attachment #9 needs to be referenced in procedure.**

Result Notes **CP 930 Rev 3/31/14 - Section 3.6.1, Attachment #9 needs to be referenced in procedure.**

Question ID, [CR.CRMRR.HANDOVER.P](#) , 192.631(b)(4) (192.631(c)(5))

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/14 - Section 2.5 - Attachment #10**

Question ID, [CR.CRMRR.HANDOVERDOC.P](#) , 192.631(b)(4) (192.631(c)(5))

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Observed in control room.**

Question ID, [CR.CRMRR.HANDOVERDOC.R](#) , 192.631(b)(4) (192.631(c)(5))

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Requested and Reviewed Electronic Version of records for April 13-27 & May 11-25, 2014**

Question ID, [CR.CRMRR.HANDOVEROVERLAP.P](#) , 192.631(b)(4)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/14 - Section 2.5.1**

Question ID, [CR.CRMRR.HANDOVERALTERNATIVE.P](#) , 192.631(b)(4)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/14 - Section 2.5.2**

Question ID, [CR.CRMRR.UNATTENDCONSOLE.P](#) , 192.631(b)(4)

References

Question Text *Has the operator established an adequate process for occasions when the console is left temporarily unattended for any reason?*

Result **Sat**

Assets Covered [CNG CRM](#)

Result Notes [CP 930 Rev 3/31/14 - Section 2.5.2](#)

Question ID, [CR.CRMRR.CONSOLECOVERAGE.P](#) , 192.631(b)(4)

References

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

Result **Sat**

Assets Covered [CNG CRM](#)

Result Notes [CP 930 Rev 3/31/14 - Section 2.5.1](#)

CR.SCADA: Supervisory Control and Data Acquisition

Question ID, [CR.SCADA.SYSTEMMOC.P](#) , 192.631(c)(1)

References

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?*

Result **Sat**

Assets Covered [CNG CRM](#)

Result Notes [CP 930 Rev 3/31/14 - Section 5.13.1](#)

Question ID, [CR.SCADA.DISPLAYCONFIG.P](#) , 192.631(c)(1)

References

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?*

Result **Sat**

Assets Covered [CNG CRM](#)

Result Notes [MDU procedure - Rev. 3/1/2013](#)

Question ID, [CR.SCADA.1165HUMANFACTORS.R](#) , 192.631(c)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes Same as WBI - Wiliston Basin Interstate (Energy) and WBI was compliant during Jan 2012 inspection and Follow-up.

Question ID, [CR.SCADA.DISPLAYOBJECTS.O](#) , 192.631(c)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes Sections are Consistent with applicable sections of API RP 1165. Reviewed SCADA Screen Design Verification Form used to check for compliance.

Question ID, [CR.SCADA.DISPLAYDYNAMICS.R](#) , 192.631(c)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes Sections are Consistent with applicable sections of API RP 1165. Reviewed SCADA Screen Design Verification Form used to check for compliance.

Question ID, [CR.SCADA.ADMINISTRATION.R](#) , 192.631(c)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes Sections are Consistent with applicable sections of API RP 1165. Reviewed SCADA Screen Design Verification Form used to check for compliance.

Question ID, [CR.SCADA.1165IMPRACTICAL.R](#) , 192.631(c)(1)

References

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?

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Some colors are different than 1165 but they have operating history, and are consistent throughout the company.**

Question ID, [CR.SCADA.SETPOINT.P](#) , 192.631(c)(2)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev. 3/31/14 - Sections 5.2.2 - 5.2.5**

Question ID, [CR.SCADA.SETPOINT.R](#) , 192.631(c)(2)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Reviewed Excel Spreadsheet all safety related points. Records appear adequate.**

Question ID, [CR.SCADA.POINTVERIFY.P](#) , 192.631(c)(2)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev. 3/31/14 - Section 3.5.1**

Question ID, [CR.SCADA.POINTVERIFY.R](#) , 192.631(c)(2)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Question ID, [CR.SCADA.POINTVERIFYEXTENT.P](#) , 192.631(c)(2)
References

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

Result **Concern**

Assets Covered **CNG CRM**

Summary **CP 930 Rev. 3/31/14 - Revise sections 3.5.1 Point to point verification and Attachments 14,15 & 16 to reflect current practices.**

Result Notes **Reviewed Section 3.5.1 and do not feel that the text is adequately describes the process.**

Question ID, [CR.SCADA.POINTVERIFYEXTENT.R](#) , 192.631(c)(2)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Reviewed Point to Point verifications in Control Room, found documentation adequate**

Question ID, [CR.SCADA.POINTVERFIYINTVL.P](#) , 192.631(c)(2)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Question ID, [CR.SCADA.POINTVERFIYINTVL.R](#) , 192.631(c)(2)
References

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

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Control Room has only been in operation for three (3) months.**

Question ID, [CR.SCADA.COMMPLAN.P](#) , 192.631(c)(3)

References

Question Text *Has an internal communication plan been established and implemented that is adequate to manually operate the pipeline during a SCADA failure/outage?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Controller Monitor the pipeline only, no automated functions (Manual)**

Question ID, [CR.SCADA.COMMPLAN.R](#) , 192.631(c)(3)

References

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?*

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Control Room has been in operation for only three (3) months.**

Question ID, [CR.SCADA.BACKUPSCADA.O](#) , 192.631(c)

References

Question Text *Is there a backup SCADA system?*

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Currently do not have a backup SCADIA system.**

Question ID, [CR.SCADA.BACKUPSCADADEV.P](#) , 192.631(c)(4)

References

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

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Currently do not have a backup SCADIA system.**

Question ID, [CR.SCADA.BACKUPSCADATEST.R](#) , 192.631(c)(4)

References

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

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Currently do not have a backup SCADIA system.**

Question ID, [CR.SCADA.BACKUPSCADAVERIFY.R](#) , 192.631(c)(4)

References

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?*

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Currently do not have a backup SCADIA system.**

Question ID, [CR.SCADA.BACKUPSCADADEQUACY.R](#) , 192.631(c)(4)

References

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?*

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Currently do not have a backup SCADIA system.**

Question ID, [CR.SCADA.BACKUPSCADATRANSFER.P](#) , 192.631(c)(4)

References

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

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Currently do not have a backup SCADIA system.**

Question ID, [CR.SCADA.BACKUPSCADARETURN.P](#) , 192.631(c)(4)

References

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

Result NA

Assets Covered CNG CRM

Result Notes Currently do not have a backup SCADIA system.

Question ID, [CR.SCADA.BACKUPSCADAFUNCTIONS.R](#) , 192.631(c)(4)

References

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?*

Result NA

Assets Covered CNG CRM

Result Notes Currently do not have a backup SCADIA system.

CR.CRMFM: Fatigue Management

Question ID, [CR.CRMFM.FATIGUEMITIGATION.P](#) , 192.631(d)

References

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

Result Sat

Assets Covered CNG CRM

Result Notes CP 930 Revision March 31, 2014 Section 4 - Hours of Service per Appendix #14.

Question ID, [CR.CRMFM.FATIGUERISKS.P](#) , 192.631(d)

References

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

Result Sat

Assets Covered CNG CRM

Result Notes Controllers have required Circadian Training Once/Yr. Circadian Newsletter is distributed. Reviewed two(2) operators re-certifications, Ron Horn 28Dec2013;

Sandy
Bessent Jan7,2014.

Question ID, [CR.CRMFM.FATIGUEQUANTIFY.P](#) , 192.631(d)
References

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

Result **Sat**

Assets Covered [CNG CRM](#)

Result Notes [CP 925 Rev. March 26, 2013, Section .072\(c\). Reference PHMSA Form #7100.1 Rev. 06-2011, Part E, Section 7.](#)

Question ID, [CR.CRMFM.FATIGUEMANAGER.P](#) , 192.631(d)
References

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?*

Result **Sat**

Assets Covered [CNG CRM](#)

Result Notes [Supervisor monitors HOS \(Hours of Service\) during the Bi-Weekly Salary Review. Attachment #16 \(Should be Form #16 see notes\) needs to be revised to include the following information. Form needs Who, What When Where , Why + Manager Signature \(sign off\) and Date.](#)

Question ID, [CR.CRMFM.SHIFTLENGTH.R](#) , 192.631(d)(1)
References

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?*

Result **Sat**

Assets Covered [CNG CRM](#)

Result Notes [Modified Dupont - Shift Length is 12 hours with 1/2 hour turn over.](#)

Question ID, [CR.CRMFM.SHIFTLENGTHTIME.R](#) , 192.631(d)(1)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **All Controllers live within 15-30 miles of work. Use Modified Dupont - Shift Length is 12 hours with 1/2 hour turn over.**

Question ID, [CR.CRMFM.SCHEDULEDTIMEOFF.R](#) , 192.631(d)(1)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **All Controllers live within 15-30 miles of work. Use Modified Dupont - Shift Length is 12 hours with 1/2 hour turn over.**

Question ID, [CR.CRMFM.ONCALLCONTROLLER.R](#) , 192.631(d)(1)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Adequate answer for Calling Out person of experience. Circadian Training every year and Newsletter is distributed to Controllers.**

Question ID, [CR.CRMFM.MAXHOS.P](#) , 192.631(d)(4)

References

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?*

Result **Sat+**

Assets Covered **CNG CRM**

Result Notes **63 hours maximum - CP 930 Rev 3/31/2014 Section 4.2.2.1**

Question ID, [CR.CRMFM.MINTIMEOFF.P](#) , 192.631(d)(4)

References

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?*

Result **Sat+**

Assets Covered **CNG CRM**

Result Notes **34 hours minimum time off - CP 930 Rev 3/31/2014 Section 4.2.2.1**

Question ID, [CR.CRMFM.DOCSCHEDULE.P](#) , 192.631(d)(4)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Bi-Weekly Review for Hours of Service (HOS) and time-sheet.**

Question ID, [CR.CRMFM.DAYSOFF.P](#) , 192.631(d)(4)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Schedule procedure and monitor With HOS Manager - For CNGC is Supervisor Gas Control.**

Question ID, [CR.CRMFM.WORKHOURS.R](#) , 192.631(d)(4)

References

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.?

Result **NA**

Assets Covered **CNG CRM**

Result Notes **No such event occurred, or condition existed, in the scope of inspection review. Day schedule used as required, but have not used since Start UP on 7/31/2014. - HOS Clarification**

Question ID, [CR.CRMFM.FATIGUECOUNTERMEASURES.P](#) , 192.631(d)(4)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Fatigue Countermeasures are available for the entire 12HR shift.**

Question ID, [CR.CRMFM.DAILYHOSLIMIT.P](#) , 192.631(d)(4)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Cp 930 Rev 3/31/2014 - Section 4.2.2.2**

Question ID, [CR.CRMFM.CONTROLLERNUMBERS.O](#) , 192.631(d)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **6 controllers and 1 supervisor**

Question ID, [CR.CRMFM.OFFDUTYHOURS.P](#) , 192.631(d)(4)
References

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?

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 Section 4.2.2.1 - 34 hours minimum time off.**

Question ID, [CR.CRMFM.SHIFTHOLDOVER.P](#) , 192.631(d)(4)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 Section 4.2.3**

Question ID, [CR.CRMFM.SPECIFICCOUNTERMEASURES.P](#) , 192.631(d)(4)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Bi-Weekly review of HOS for each controller - CNGC uses a DuPont Modified with a shift lent of 12 Hrs**

Question ID, [CR.CRMFM.HOSDEVIATIONS.P](#) , 192.631(d)(4)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 Section 4.2.3**

Question ID, [CR.CRMFM.FATIGUEEDUCATE.P](#) , 192.631(d)(2) (192.631(d)(3))
References

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

Result **Sat**

Assets Covered CNG CRM

Result Notes Reviewed Fatigue Management Curriculum

Question ID, [CR.CRMFM.FATIGUEEDUCATE.R](#) , 192.631(d)(2) (192.631(d)(3))
References

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

Result **Unsat**

Assets Covered CNG CRM

Summary Controller Supervisor completed Supervisor Training for Managing Operator Fatigue on 6/4/2014.

Result Notes Controller Supervisor had not completed Required Supervisor Training by first day of inspection.
Supervisor had been working without Required Training Supervisors and Fatigue Risk Management. Supervisor Required Training from 3/13/2004 to 6/3/2014.
Supervisor completed training on 6/4/2014.

Question ID, [CR.CRMFM.FATIGUEREFRESHER.R](#) , 192.631(d)(2) (192.631(d)(3))
References

Question Text *Is refresher fatigue education provided at regular intervals?*

Result **Sat**

Assets Covered CNG CRM

Result Notes Circadian training is re qualified every year. Also a Circadian Newsletter is distributed to the controllers.

Question ID, [CR.CRMFM.FATIGUEREVIEW.P](#) , 192.631(d)(2) (192.631(d)(3))
References

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?*

Result **Sat**

Assets Covered CNG CRM

Result Notes CP 930 Rev 3/31/2014 Section 8.1

Question ID, [CR.CRMFM.FATIGUESTRATEGY.P](#) , 192.631(d)(2)

References

Question Text *Does fatigue education address fatigue mitigation strategies (countermeasures)?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Reviewed training records for Fatigue Management provided by Circadian. Controllers are re-certified annually.**

Question ID, [CR.CRMFM.OFFDUTY.P](#) , 192.631(d)(2)

References

Question Text *Does fatigue education address how off-duty activities contribute to fatigue?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Reviewed training records for Fatigue Management provided by Circadian. Controllers are re-certified annually.**

Question ID, [CR.CRMFM.FATIGUECONTENT.P](#) , 192.631(d)(3)

References

Question Text *Is the content of fatigue training adequate for training controllers and supervisors to recognize the effects of fatigue?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Reviewed training records for Fatigue Management.**

Question ID, [CR.CRMFM.FATIGUECONTENT.R](#) , 192.631(d)(3)

References

Question Text *Has controller and supervisor training to recognize the effects of fatigue been documented?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Reviewed training records for Fatigue Management.**

CR.CRMAM: Alarm Management

Question ID, [CR.CRMAM.ALARM.P](#) , 192.631(e)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.3**

Question ID, [CR.CRMAM.ALARMMALFUNCTION.P](#) , 192.631(e)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.3.2**

Question ID, [CR.CRMAM.ALARMREVIEW.P](#) , 192.631(e)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.2**

Question ID, [CR.CRMAM.CONTROLLERPERFORMANCE.P](#) , 192.631(e)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Text, Audible, and Color are all used for each Alarm and Alert. Operational Notes are text only.**

Question ID, [CR.CRMAM.STALEDATA.P](#) , 192.631(e)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.8**

Question ID, [CR.CRMAM.MONTHLYANALYSIS.P](#) , 192.631(e)(2)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Sections 5.10.1- Reviewed Meeting documentation for April and May 2014. Operation started on 3/31/2014.**

Question ID, [CR.CRMAM.PROBLEMCORRECTION.P](#) , 192.631(e)(2)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.9**

Question ID, [CR.CRMAM.ALARMSETPOINTS.P](#) , 192.631(e)(3)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.4**

Question ID, [CR.CRMAM.SETTINGCONTROL.P](#) , 192.631(e)(3)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Sections 5.4.1 and 5.4.2**

Question ID, [CR.CRMAM.PLANREVIEW.P](#) , 192.631(e)(4)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.14**

Question ID, [CR.CRMAM.PLANREVIEW.R](#) , 192.631(e)(4)
References

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?*

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Sarted opration on March 31, 2014 - Currently only have 2-3 months of operation.**

Question ID, [CR.CRMAM.WORKLOAD.P](#) , 192.631(e)(5)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.12 - Will do annually.**

Question ID, [CR.CRMAM.WORKLOADMONITORING.P](#) , 192.631(e)(5)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.12.1**

Question ID, [CR.CRMAM.CONTROLLERREACTION.P](#) , 192.631(e)(5)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 5.10.1**

Question ID, [CR.CRMAM.PERFORMANCEANALYSIS.R](#) , 192.631(e)(5)

References

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

Result **NA**

Assets Covered **CNG CRM**

Result Notes **Only two months in for an Annual Report/Study**

Question ID, [CR.CRMAM.DEFICIENCIES.P](#) , 192.631(e)(6)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Sections 5.7, 5.8, 5.9, 5.10**

Question ID, [CR.CRMAM.DEFICIENCIES.R](#) , 192.631(e)(6)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Sections 5.7, 5.8, 5.9, 5.10**

CR.CRMCMGT: Change Management

Question ID, [CR.CRMCMGT.EQUIPMENTCHANGES.P](#) , 192.631(f)(1)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Sections 5.13.1**

Question ID, [CR.CRMCMGT.CONTROLLERPARTICIPATE.P](#) , 192.631(f)(1) (192.631(f)(3))

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 6.1**

Question ID, [CR.CRMCMGT.CONTROLLERPARTICIPATE.R](#) , 192.631(f)(1) (192.631(f)(3))

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Gas Control Meeting Once per Month. Reviewed notes for 3 monthly meetings.**

Question ID, [CR.CRMCMGT.EMERGENCYCONTACT.P](#) , 192.631(f)(2)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 925 Rev 3/26/2013 - Emergency Policy Sec .013**

Question ID, [CR.CRMCMGT.FIELDCONTACT.P](#) , 192.631(f)(2)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Sections 6.3.1**

Question ID, [CR.CRMCMGT.FIELDCHANGES.R](#) , 192.631(f)(2)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Reviewed Log for Terry at McCleary replacing RTU - May 1, 2014**

CR.CRMEXP: Operating Experience

Question ID, [CR.CRMEXP.ABNORMALREVIEW.P](#) , 192.631(g)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Sections 7.2 Attachment 13**

Question ID, [CR.CRMEXP.ABNORMALREVIEW.R](#) , 192.631(g)(1)

References

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?*

Result **Concern**

Assets Covered **CNG CRM**

Summary **Attachment 13 does not show (Controller Fatigue) as a Human Factor to consider in the investigation of an incident.**

Result Notes **No incidents have occurred to date. Attachment #13 does not show (Controller Fatigue) as a Human Factor to consider in the case of an incident.**

Question ID, [CR.CRMEXP.LESSONSLEARNED.P](#) , 192.631(g)(2)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 7.4 - Lessons learned as part of Monthly Meeting.**

Question ID, [CR.CRMEXP.LESSONSLEARNED.R](#) , 192.631(g)(2)

References

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.)?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Reviewed minutes of three(3) monthly meetings.**

CR.CRMTRAIN: Training

Question ID, [CR.CRMTRAIN.CONTROLLERTRAIN.P](#) , 192.631(h)

References

Question Text *Has a controller training program been established to provide training for each controller to carry out their roles and responsibilities?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 8**

Question ID, [CR.CRMTRAIN.CONTROLLERTRAIN.R](#) , 192.631(h)

References

Question Text *Has a controller training program been implemented to provide training for each controller to carry out their roles and responsibilities?*

Result **Unsat**

Assets Covered **CNG CRM**

Summary **Controller Supervisor had not completed required training prior to assuming the Supervisor role at start-up on 3/31/2014. Controller Supervisor operated for two (2) months without being Qualified. Completed training on June 4, 2014, during this inspection.**

Result Notes **Reviewed controller training records and all but the Controller Supervisor training seem to be in order.**

Question ID, [CR.CRMTRAIN.TRAININGREVIEW.P](#) , 192.631(h)

References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 930 Rev 3/31/2014 - Section 8.9**

Question ID, [CR.CRMTRAIN.TRAININGREVIEW.R](#) , 192.631(h)

References

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?*

Result **NA**

Assets Covered **CNG CRM**

Result Notes Only in operation for two(2) months.

Question ID, [CR.CRMTRAIN.TRAININGCONTENT.R](#) , 192.631(h)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes CRM Initial training covers subjects required and they have been operating for two (2) months.

Question ID, [CR.CRMTRAIN.AOCLIST.R](#) , 192.631(h)(1)
References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes AOC training is done during OQ - ON LINE training, Attachments 2, 3, and 4. Reviewed Quiz of Energy U On-Line Section 9) Abnormal Operations

Question ID, [CR.CRMTRAIN.TRAININGABNORMAL.P](#) , 192.631(h)(1)
References

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?*

Result **Sat**

Assets Covered **CNG CRM**

Result Notes AOC training is done during OQ - ON LINE training, Attachments 2, 3, and 4. Reviewed Quiz of Energy U On-Line Section 9) Abnormal Operations

Question ID, [CR.CRMTRAIN.TRAINING.R](#) , 192.631(h)(2)
References

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?*

Result **Sat**

Assets Covered CNG CRM

Result Notes Original training used a simulator, actual Control Room SCADA. Plan on doing tabletop exercises in the future.

Question ID, [CR.CRMTRAIN.TRAINING.O](#) , 192.631(h)(2)
References

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

Result **Sat**

Assets Covered CNG CRM

Result Notes Plan on using table top exercises. Witnessed unannounced test of controller response to HiHi alarm on pressure.

Question ID, [CR.CRMTRAIN.COMMUNICATIONTRAINING.P](#) , 192.631(h)(3)
References

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

Result **Sat**

Assets Covered CNG CRM

Result Notes CP 925 Rev 3/26/2013 - Emergency Policy Section .013

Question ID, [CR.CRMTRAIN.SYSKNOWLEDGE.P](#) , 192.631(h)(4)
References

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

Result **Sat**

Assets Covered CNG CRM

Result Notes CP 960 Rev 3/31/2014 - Section 8

Question ID, [CR.CRMTRAIN.INFREQUOPSLIST.R](#) , 192.631(h)(5)
References

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

Result NAAssets Covered **CNG CRM**Result Notes **Do not use 'Infrequently Used Pipeline Setup'**

Question ID, [CR.CRMTRAIN.INFREQOPSREVIEW.P](#) , 192.631(h)(5)**References**

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?*

Result NAAssets Covered **CNG CRM**Result Notes **Do not use 'Infrequently Used Pipeline Setup'**

CR.CRMCOMP: Compliance Validation and Deviations**Question ID,** [CR.CRMCOMP.SUBMITPROCEDURES.P](#) , 192.631(i)**References**

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

Result SatAssets Covered **CNG CRM**Result Notes **CP 960 Rev 3/31/2014 - Section 9.1.1**

Question ID, [CR.CRMCOMP.SUBMITPROCEDURES.R](#) , 192.631(i)**References**

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

Result SatAssets Covered **CNG CRM**Result Notes **Tina sends an E-mail to Marina/Rhonda**

Question ID, [CR.CRMCOMP.CRMCOORDINATOR.R](#) , 192.631(j)**References**

Question Text *Is there an individual that is responsible and accountable for compliance with*
Question ID, [CR.CRMCOMP.REMVALS.D](#) *the applicable agencies?*

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **I have reviewed the CRM procedure**

Question ID, [CR.CRMCOMP.RECORDS.R](#) , 192.631(j)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **Appear to be sufficient for this control room.**

Question ID, [CR.CRMCOMP.ELECTRONICRECORDS.R](#) , 192.631(j)(1)

References

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

Result **Sat**

Assets Covered **CNG CRM**

Result Notes **CP 960 Rev 3/31/2014 - Sections 9.1.3 & 10.2.1**

Question ID, [CR.CRMCOMP.DEVIATIONS.P](#) , 192.631(j)(2)

References

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?*

Result **NA**

Assets Covered **CNG CRM**

Result Notes **CP 960 Rev 3/31/2014 - Section10.2**

Question ID, [CR.CRMCOMP.DEVIATION.R](#) , 192.631(j)(2)

References

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

Result SatAssets Covered **CNG CRM**

Result Notes **Deviation was to use the CRM manual as written until MOC can be fully implemented. Reviewed E-mail request for Deviation for CP930 from engineering Mon, March 31, 2014.**

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