

2020 South Dakota Pipeline Safety Inspection

Summary of Deficiencies

Operator: Xcel Energy

Inspection Types: Standard Records, Field Inspection, OQ Plan and Records and Control Room Management

Inspection Dates: October 2 -November 30, 2020

Notices of Probable Violation

Code Section	Code Description	Deficiency Noted	Proposed Correction Due Date	Penalty Proposed	Maximum Allowable Penalty	Compliance Order Proposed
192.631(h)	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?	<p>Don't document the review appropriately on the form. Do show updates to controller modules.</p> <p>Review should include a summary of what was analyzed, what was discovered and what changes were made based on those discoveries. If nothing is changed, then a reason for no changes being made should be described. Need to use form referenced.</p> <p>This issue has been identified in every Control Room Management Inspection starting in 2013. (Previously identified as question H0-2 in the CRM Protocols.) In 2013 the requirement wasn't due, but it was discussed. In 2017 a warning was issued for not fulfilling this requirement.</p>	1/29/2021	\$1,138	\$200,000 per day with a maximum of \$2 million.	Operator must implement appropriate measures to ensure compliance with this code requirement.

		<p>Per email/letter received 1/19/2021:</p> <p>The 2020 controller training review was completed using an appropriate form on December 7, 2020.</p> <p>Additionally, a reoccurring task has been added to the RSA Archer system to review annual CRM compliance requirements such as the controller training review. For 2020, this new RSA Archer task was completed on December 20th.</p> <p>A check for \$1,138 has been requested and will submitted directly to the SDPUC.</p> <p>Request for copy of the CRM plan was sent 1/20/2021.</p> <p>Copy of CRM plan (confidential) was received 1/20/2021</p> <p>Request for a copy of the "2020 controller training review" was requested on 1/21/2021.</p> <p>Review provided 2/16/2021 by EK.</p> <p>Item closed per MZ on 2/25/2021.</p>				
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192.631(h)(6)	<p>(6) Control room team training and exercises that include both controllers and other individuals, defined by the operator, who would reasonably be expected to operationally collaborate with controllers (control room personnel) during normal, abnormal or emergency situations.</p> <p>Operators must comply with the team training requirements under this paragraph by no later than January 23, 2018.</p>	<p>This section of code has not been implemented. The requirements need to be added to the plan. All documentation regarding completion of team training must be documented.</p> <p>192.631 (h) (6) was added January 23, 2017 and required to be implemented by January 23, 2018.</p> <p>Per email/letter received 1/19/2021:</p> <p>The CRM manual has been revised for version 2021-1: Appendix H.1, Added 192.631(h)(6) control room team requirements code language; Appendix H.2, Updated team training situations; and Appendix H.3, added control room team requirements.</p> <p>A check for \$938 has been requested and will be submitted directly to the SDPUC.</p> <p>Request for copy of the CRM plan was sent 1/20/2021.</p> <p>Copy of CRM plan (confidential) was received 1/20/2021</p>	1/29/2021	\$938	\$200,000 per day with a maximum of \$2 million.	Operator must implement appropriate measures to ensure compliance with this code requirement.
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		Item closed per MZ on 1/21/2021.				
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Warnings

Code Section	Code Description	Deficiency Noted	Warning	Proposed Correction Due Date
192.801	How do you identify which tasks apply to each individual?	<p>Information is not clear in the plan but they have another document that details this information. Tasks are identified by job title. This information needs to be added to the plan.</p> <p>Per email/letter received 1/19/2021: Tasks by job title are included in Section 3 of the Operator Qualification (OQ) Manual 2021-1. Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received 1/20/2021.</p> <p>Item closed per MZ on 1/21/2021.</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	1/29/2021
192.803	Does the plan have generic AOCs that could be found anywhere near the pipeline?	<p>Generic AOCs are not identified. All AOCs are task specific. Per discussion the New plan will have one AOC covered task. Ensure this information is included in revised plan.</p> <p>Per email/letter received 1/19/2021: Generic AOC's are included in Appendix B of the Operator</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	1/29/2021

Warnings

Code Section	Code Description	Deficiency Noted	Warning	Proposed Correction Due Date
		<p>Qualification (OQ) Manual 2021-1. Request of copy of the OQ manual was sent 1/20/2021.</p> <p>Copy for OQ Manual was received 1/20/2021.</p> <p>Item closed per MZ on 1/21/2021.</p>		
192.803	<p>What are the methods used for evaluating an individual's ability to perform a covered task? (Written, Oral, Observation/Performance)</p>	<p>In section 4, Evaluation Process the methods of evaluations includes (Item 5) workshops, which could include hands-on training, classes, outside vendor demonstrations with evaluations. Per discussion this type of evaluation will not be included in the revised plan. Please ensure that change is made.</p> <p>Per email/letter received 1/19/2021: "Evaluation Processes" was in Section 4 of the 2020 OQ Manual but is now in Section 5 in the 2021 OQ Manual. Workshops have been removed as an evaluation method from Section 5 of the Operator Qualification (OQ) Manual 2021-1.</p> <p>Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received</p>	<p>Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.</p>	1/29/2021

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		<p>1/20/2021.</p> <p>Item closed per MZ on 1/21/2021.</p>		
192.803	Review the evaluation method of each of the covered task to determine if the method is appropriate.	<p>Appendix A uses W, P, S & O as evaluation methods but they are not defined. Please ensure the revised plan includes those definitions.</p> <p>Per email/letter received 1/19/2021: Definition of the evaluations are included in Section 5 of the Operator Qualification (OQ) Manual 2021-1.</p> <p>Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received 1/20/2021.</p> <p>Item closed per MZ on 1/21/2021.</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	1/29/2021
192.803	If oral evaluations are used, are they limited to situations where other methods are not appropriate?	<p>Some tasks have the option for oral evaluations and not others do not. Per discussion new plan will provide a definition of oral and describe how it is applied.</p> <p>Per email/letter received 1/19/2021: Oral evaluations are described in Section 5 of the Operator</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	1/29/2021

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		<p>Qualification (OQ) Manual 2021-1. Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received 1/20/2021.</p> <p>Item closed per MZ on 1/21/2021.</p>		
192.803	Are all observation/performance evaluations done one on one?	<p>This requirement is not stated. Recommend that it is included in the next edition of the OQ plan. Per email/letter received 1/19/2021: Evaluations are performed 1:1 as stated in Section 5 of the Operator Qualification (OQ) Manual 2021-1. Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received 1/20/2021.</p> <p>Item closed per MZ on 1/21/2021.</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	1/29/2021
192.803	How are high/medium/low and significant/insignificant/critical changes defined?	<p>Significant is used in Section 7.4. Suggest significant be defined in the next version. Per email/letter received 1/19/2021: Examples of significant changes are listed in Section 2 of the Operator</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	1/29/2021

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		<p>Qualification (OQ) Manual 2021-1. Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received 1/20/2021.</p> <p>Item closed per MZ on 1/21/2021.</p>		
192.803	Is there documentation of the changes that have occurred to the OQ program?	<p>Need to track reviews and changes to the OQ program. 2015 was previous revision. Nothing document for 2016-2018. How will documentation be ensured in the future?</p> <p>Per email/letter received 1/19/2021: Management of Change is included in Section 8 of the Operator Qualification (OQ) Manual 2021-1. Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received 1/20/2021.</p> <p>Item closed per MZ on 1/21/2021.</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	1/29/2021
192.803	What method was used to determine the requalification time frame?	<p>DIF analysis completed originally. Now going to B31Q but not changing requalification timeframe. Plan needs to include information</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	1/29/2021 EK requested extension

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		<p>about how requalification time was determined. Per email/letter received 1/19/2021: The Difficulty / Importance (DI) Analysis adopted from B31Q is included in Section 5.8 of the Operator Qualification (OQ) Manual 2021-1. Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received 1/20/2021.</p> <p>On 1/21/2021 requested follow-up on the item below:</p> <p>I believe there is a typo in the following that I have corrected, but I'm not sure because the section continues to talk about a DI Analysis. I'm not sure why it is not considering frequency as well as difficulty and importance, but it should be. B31.Q discusses a DIF analysis, not a DI analysis. 5.8 DIF ANALYSIS FOR SUBSEQUENT QUALIFICATION INTERVALS</p>		<p>on 1/28/2021. Granted by MZ on 1/28/2021.</p>

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		<p>Per email from EK on 2/26/2021: The “F” was left out of Section 5.8 since Xcel Energy incorporated the frequencies for each task as stated in ASME B31Q. The “F” will be included in the Xcel Energy OQ Manual 2022.</p> <p>Item closed per MZ on 2/26/2021.</p>		
192.803	Is the qualification removed from an individual who has been observed completing a task incorrectly? Who can report those situations?	<p>Plan should identify who can report incorrect completion of tasks.</p> <p>Per email/letter received 1/19/2021: Suspension and disqualification policies, included who can report a situation, is included in Section 4.6. of the Operator Qualification (OQ) Manual 2021-1.</p> <p>Request for copy of the OQ manual was sent 1/20/2021.</p> <p>Copy of OQ Manual was received 1/20/2021.</p> <p>On 1/21/2021 requested follow-up on the item below: I’m not finding this resolution in 4.6. Can you help me out?</p>	Xcel may be in violation of the code section in Column A. Xcel is advised to correct this or be subject to enforcement action.	<p>1/29/2021</p> <p>EK requested extension on 1/28/2021. Granted by MZ on 1/28/2021.</p>

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		<p>Per email on 2/26/2021 from EK: On February 24, 2021 the following was sent to Gas Operations regarding Section 5.6 Incident Review and is effective immediately. This language will be included in the OQ Manual 2022-1 : <i>Work performance can be a contributing cause to an incident. Suspected inadequate work performance can be reported by any Xcel Energy or Contract employee. Any report of potentially inadequate or incorrect work performance will be investigated and evaluated by Technical Training, Pipeline Compliance and Standards, and local Operations to determine if the individual in question should be suspended or disqualified from a covered task(s). NOTE: Technical Training and Pipeline Compliance and Standards shall be the only authority to approve a Suspension or Disqualification.</i></p> <p>Item closed per MZ on 2/26/2021.</p>		
		<p>On 1/21/2021 after review of the OQ manual I requested additional</p>		

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		<p>follow-up as indicated below.</p> <p>In the OQ plan you have the following text and I have some concern with the highlighted sentence.</p> <p>3.1 RESPONSIBILITY Xcel Energy shall be responsible for identifying training needs and providing appropriate training for individuals requiring or maintaining qualifications. Qualification groups shall be managed by Technical Training in consultation with Gas Governance, Operations Management or others as necessary or required. Covered Tasks assigned to Qualification Groups shall be determined depending on the specific scope of work of the geographical region or department the Qualification Group is located in. Qualification Groups and assigned Covered Tasks can be adjusted in accordance with work scope changes. All Contractors shall be responsible for their Qualification Group assignments and must ensure that</p>		

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		<p>the assignments adequately cover the scope of the work being performed for Xcel Energy.</p> <p>I think I understand what you are trying to say, but ultimately it is Xcel that is responsible for ensuring that the contractors doing work have the appropriate qualifications.</p> <p>Per email from EK on 2/26/2021: Xcel Energy requires contractors provide operator qualified personnel pertaining to their scope of work. Contractor agreements include the following language: CONTRACTOR RESPONSIBILITIES FOR CONSTRUCTION 2.1 Qualifications a. Contractor shall provide qualified union personnel to install underground gas, electric, and streetlight distribution systems, including pipe, cable, and equipment. Cable to include secondary and primary cable in various sizes and voltage classes, and equipment includes transformers, pedestals, basements, meters,</p>		

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		<p>meter bar assemblies, etc b. Contractor shall provide all compliance training to their personnel for Operator Qualification (OQ) to be in compliance with Department of Transportation (DOT) requirements. Contractor shall maintain OQ records and make them available to Company upon request. Contractor shall provide Company with a monthly summary report showing Operator Qualifications by employee currently assigned to Company.</p> <p>Xcel Energy has several additional steps in place to verify contractors are qualified to perform tasks as identified within their scope of work:</p> <ul style="list-style-type: none"> • 3rd party inspectors verify contractor qualifications when they arrive on site. • Internal Quality Assurance personnel verify contractor qualifications when they arrive on site. • Real time reporting for assigned tasks through our 3rd 		

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		party OQ vendor EWN. Item closed per MZ on 2/26/2021.		

Notices of Concern

Code Section	Code Description	Comment
192.631 (b)(3)	Do processes specifically address the controller's responsibilities in the event the control room must be evacuated?	B.2 identifies that evacuations plans are documented within the Control Room Operations Manual and scheduled testing throughout the year. Do not reference procedure at bottom of page. Per email/letter received 1/19/2021: The CRM Manual 2021-1, Appendix B, has been revised to include NSP and PSCo Backup Control Room - Emergency Operations Procedures. Item closed per MZ on 1/21/2021.
192.631 (b)(5)	Do others authorized to direct or supersede the technical actions of a controller demonstrate an understanding of the process to implement this authority?	Difficult question to ask the controller and didn't get the response expected. May want to discuss further in training. Per email/letter received 1/19/2021: The CRM Manual 2021-1, Section 1.4, has been revised to provide additional information regarding overriding a controller. Item closed per MZ on 1/21/2021.
192.631(d)	Does the fatigue mitigation process or procedures (plan) identify operator-specific fatigue risks?	Might want to include the 2-6 am time frame as a time to be aware of increased fatigue. Per email/letter received 1/19/2021: The CRM Manual 2021-1, Appendix D, has been revised to reflect the contents of the new CRM Fatigue Mitigation computer-based training module (via EWN), which included updating the "Low" points (midnight – 6 am, and 2 pm – 4 pm). Item closed per MZ on 1/21/2021.
192.631(d)	Do processes require that the potential contribution of controller fatigue to incidents and accidents be quantified	Need to add incident review form to appendix G. Per email/letter received 1/19/2021:

Notices of Concern

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	during investigations?	The CRM Manual 2021-1, Appendix G has been revised to list options for performing and documenting incident reviews. Item closed per MZ on 1/21/2021.
192.631(d)	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?	Should call out who is managing the overall fatigue mitigation and risk program. Per email/letter received 1/19/2021: The CRM Manual 2021-1, Appendix D.3, has been revised to state: "Ultimately the Gas Control Manager is responsible for fatigue mitigation." Item closed per MZ on 1/21/2021.
192.631(d)(1)	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?	D1 - should make minor change to say minimum of eight hours minimum sleep time rather than off duty time. Per email/letter received 1/19/2021: The CRM Manual 2021-1, Appendix D(1), has been revised to state: "Controllers to have the opportunity for a minimum of eight hours of sleep between shifts". Item closed per MZ on 1/21/2021.
192.631(d)(4)	For shifts longer than 8 hours, have specific fatigue countermeasures been implemented for the ninth and beyond hours	Suggest adding this information in the plan the counter measures available for when the work in the control room vs. working from home. Per email/letter received 1/19/2021: The CRM Manual 2021-1, Appendix D.3, has been revised to list countermeasures available to controllers working in the control room vs at home. Item closed per MZ on 1/21/2021.
192.631(d)(4)	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?	Should address handling two 14 hour shifts in any sliding 5 day period. Per email/letter received 1/19/2021: The CRM Manual 2021-1, Appendix D.3, has been revised to state "Controllers will not normally be allowed more than two (2), 14- hour shifts per five (5)

Notices of Concern

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		consecutive calendar days." Item closed per MZ on 1/21/2021.
192.631(e)(1)	Does the review of safety-related alarms include specific procedures and practices for managing stale or unreliable data?	Alarm Management Philosophy should be referenced on bottom of E.6 Per email/letter received 1/19/2021: The CRM Manual 2021-1, has been revised to fully incorporate the Alarm Management Philosophy document as a new Appendix K. Item closed per MZ on 1/21/2021.
192.631(e)(4)	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?	Don't have documentation of the review but do have edits that have been made. Included in the CRM plan review discussed earlier in the inspection. E.4 not using Alarm Management Plan Review form. Per email/letter received 1/19/2021: The CRM Manual 2021-1, Appendix E, has been revised to state: "This review will be completed with the overall annual CRM plan review as all CRM manual appendices are part of the review." Item closed per MZ on 1/21/2021.
192.631(h)(1)	Has a list of the abnormal operating conditions that are likely to occur simultaneously or in sequence been established?	Appendix H needs to reference Alarm Limits and Response Procedures. Per email/letter received 1/19/2021: The CRM Manual 2021-1, has been revised to fully incorporate the Alarm Management Philosophy document as a new Appendix K. Item closed per MZ on 1/21/2021.
192.631(i)	Has the operator been responsive to requests from applicable agencies to submit their CRM procedures?	I got the CRM plan when requested, but when procedures are reference in CRM plan, they need to be included in the request to allow review. Per email/letter received 1/19/2021: During the latest revision, efforts were made to add in procedures required by 192.631 in the manual. The

Notices of Concern

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		<p>CRM Manual 2021-1 has been revised to include Appendix K Alarm Plan Management Philosophy, Appendix L HMI Style Guide and Appendix C.8 Shift Transfer Item closed per MZ on 1/21/2021.</p>
192.631(j)(1)	<p>Are records sufficient to demonstrate compliance with the CRM rule?</p>	<p>Forms called out in the CRM plan need to be utilized. If a form isn't working, make revisions and adapt to something that does work. Per email/letter received 1/19/2021: The referenced form was completed in 2020. Xcel Energy is moving toward electronic Microsoft forms where the CRM record will be stored on SharePoint. Item closed per MZ on 1/21/2021.</p>
192.631(j)(1)	<p>Are electronic records properly stored, safeguarded, and readily retrievable?</p>	<p>Records are organized in a method specific to the job, but to find examples is difficult. Large number of documents and it is difficult to manage. Looking to change methods of storage. Per email/letter received 1/19/2021: Xcel Energy is considering optimizing file management for its CRM Records. Item closed per MZ on 1/21/2021.</p>