Utilities and Transportation Commission
Pipeline Safety
Operator Annual Review Checklist

A completed **Annual Review form and Cover Letter/Field Report** must be submitted to the Chief Engineer within **30 days** from completion of the inspection.

Inspection Report			
Inspection ID	8069		
Inspector Name & Submit Date	Derek Norwood/June 11, 2020		
Chief Eng Name & Review/Date	Joe Subsits, 6/12/2020		
Operator Information			
Name of Operator:	City of Ellensburg Gas Department	**OP ID #**	04400
Inspection Date:	June 3, 2020		

Review Summary:

This inspection was conducted remotely via Webex. City of Ellensburg was able to provide records and manuals either via screen sharing or email. Staff reviewed revisions to CP 1, CP 3, CP 21, CP 22 and CP 23. City of Ellensburg provided all records requested and were able to provide answers to all applicable questions. There are no violations or areas of concern as a result of this inspection.

HQ Address:	**System/Unit Name & Address:**
501 N Anderson St Ellensburg, WA 98926	
Co. Official: **Phone No.:** **Fax No.:** **Emergency Phone No.:**	**Phone No.:** **Fax No.:** **Emergency Phone No.:**

Persons Interviewed	**Title**	**Phone No.**
Darren Larsen	Assistant Utilities Director	509-962-7227
Darin Yusi	Gas Engineer	509-962-7229

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SYSTEM OPERATIONS	
Miles of transmission pipeline within unit (total miles and miles in Class 3 & 4 locations): **0 miles**	Number of deferred leaks in system: **No deferred leaks**
Number of excavation damage hits last year: **3 hits (1 main and 2 services)**	

	REVIEW QUESTIONS	S/Yes	U/No	N/A
1.	Was the Annual Report reviewed for accuracy and trends? If any trends discovered, please describe **No noteworthy trends, leaks and damages appear to be consistent year-to-year and there is a minimal increase in the mileage from 2018 to 2019**	X		
2.	Has the following damage prevention issues been reviewed in the annual report? • Is the information complete? **Yes** • Is the root cause information complete and accurate? **Yes** • Evaluate cause of "One-call notification practices not sufficient" category. **None in 2019** • Evaluate the cause of "Locating practices not sufficient" **None in 2019** • Is the operator or its contractor qualified and following procedures for locating and marking facilities? **Yes** • Is the operator appropriately requalifying locators to address performance deficiencies? **Yes, in-house locators requalified periodically** • What is the number of damages resulting from mismarks? 0 • What is the number of damages resulting from not locating within time requirements (no shows)? 0 • Is the operator appropriately addressing discovered mapping errors resulting in excavation damage? • Are mapping corrections timely and according to written procedures? **Maps are updated within 6 months** • Evaluate the causes for damages listed as "Excavation Practices Not Sufficient." **Ellensburg had two damages in 2019 of this type and both were due to 3rd party excavators digging with machinery when they should have been hand digging. Locates were accurate but the excavators were digging too close to the pipeline** • Is the operator appropriately focusing damage prevention education and training to address the causes of excavation damage?	X		
3.	For transmission operators, has the operator submitted information to the NPMS database, along with changes made after the original submission? **Not a transmission operator**			X
4.	Were there federally reportable incidents during the previous year?		X	
5.	Review operator records of previous accidents and failures including reported third party damage and leak response to ensure appropriate operator response as required in procedures required in 192.617 (gas) or 195.402 (liquids) to determine cause of failure and minimizing the possibility of reoccurrence? **Response times from state reportable events were adequate**	X		
6.	Were incident reports reviewed for accuracy and trends? If any trends discovered please describe. **No noteworthy trends**	X		
7.	Were there reportable or unreportable safety related conditions during the previous year? If yes please describe.		X	

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8.	For transmission systems, were there any abnormal operating conditions (as described in 49 CFR 192.605 (c) or 49 CFR 195.402(d))? If yes please describe. **Not a transmission operator**			X
9.	Were there changes to the O&M Manual during the previous year? **Ellensburg made many revisions to their O&M plan. I reviewed revisions to Section for their MAOP revision, Section 3 which included the new code requirements for plastic pipe design and Section 21.5 for EFV installation**	X		
10.	Are the changes acceptable? **Reviewed sections 1 (MAOP), 3 (Design), 21.5 (EFV)**	X		
11.	Is the O&M Manual up to date? **Latest revisions were submitted in May 2020**	X		
12.	Were emergency plans changed during the previous year? **Ellensburg revised the emergency plans (Section 18) to reflect changes regarding COVID-19 (e.g. entering homes, social distancing, PPE, sanitation). No changes regarding pipeline emergency response**	X		
13.	Were the changes satisfactory?	X		
14.	Were there changes to the Integrity management program (TIMP and DIMP for LDC's)? **Minor changes to the DIMP included a statement regarding independent evaluation of Ellensburg CP system by 3rd party. This was done in 2019 and no new threats were determined. They also have begun to focus more on outside force damage. During the past two winters, Ellensburg has had risers hit by snow removal equipment. They have increased the number of bollards in downtown areas and are looking for residential areas that may need them.**	X		
15.	Is the integrity management program up to date? What are the results of the operator's program review (effectiveness evaluation) (DIMP every 5 years)? **Ellensburg conducts an annual review the number of certain events events (e.g. gas leaks during leak survey, calls from public). The only area that appeared to be significantly higher than the rolling 5-year average was "Valve leaks found during leak survey". Ellensburg is assessing the need for replacement and addition of new valves**	X		
16.	Are IMP program changes acceptable?	X		
17.	Is appropriate assessment/repair work conducted during the past year? (monitor progress of IMP activities) **Data has been collected during routine O&M tasks as well as exposed pipe condition reports. They also employed a 3rd party to assess their CP system. There were no significant findings from this independent assessment**	X		
18.	Does the operators HCA's correspond to the UTC GIS map? **Ellensburg does not have any transmission lines and has not assessed for the presence of HCAs**			X
19.	What assessment work is planned for the upcoming year? **City of Ellensburg will continue to assess the needs for bollards in residential areas and downtown. They are also assessing the need for more valves for emergency response. Along with this, they plan to continue collecting data through regular O&M tasks**	X		
20.	Are low pressure systems evaluated for overpressure threats? Did the operator develop and follow specific procedures for low pressure system construction projects? **City of Elensburg has no low pressure systems**			X
21.	Are plastic pipe and components that have shown a record of defects/leaks been mitigated through the DIMP plans? **Drisco 8000 identified in DIMP plan to monitor, have not had any issues with the pipe that they have, . They replace it as necessary and minimize squeezing. They also noted that they have a good idea of where the Drisco 8000 pipe is.**	X		

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22.	Has appropriate DIMP remediation work occurred during the past year? (monitor progress of DIMP activities) **Installed bollards and installed extra valves in previous years.**	X		
23.	What DIMP remediation work is anticipated for upcoming year? **Looking to residential areas for bollards and addition of valves**	X		
24.	Were there changes to the Operator Qualification program? If yes, please describe. **Section 13.2.2 included recommendation from UTC 2019 OQ inspection. Aside from this, there were no major revisions**	X		
25.	Is the Operator Qualification program up to date?	X		
26.	Are plan updates satisfactory?	X		
27.	Are personnel performing covered tasks (including contractors) properly qualified and requalified at intervals determined in the operators plan? **Reviewed Matt Douglas OQs, will review the rest of employees during the standard inspection**	X		
28.	Were there changes to the public awareness program?		X	
29.	Is the public awareness program up to date? **Reviewed Feb 2020 but no revisions occurred**	X		
30.	Are changes to the public awareness program satisfactory?			X
31.	Is the following information on the operator's web page? (Not a regulatory question) • Pipeline purpose and reliability ✓ • Damage Prevention ✓ • Pipe location information • How to get additional information ✓ • National Pipeline Mapping system • One call requirements ✓ • Potential Hazards ✓ • Prevention measures ✓ • Leak/damage recognition ✓ • ROW encroachment • Pipeline location information • Integrity management programs • Emergency preparedness https://ci.ellensburg.wa.us/	X		
32.	Were there changes to the Control Room Management Program? **City of Ellensburg has no control room**			X
33.	Is the control room management program up to date? **City of Ellensburg has no control room**			X
34.	Are the control room management program changes satisfactory? **City of Ellensburg has no control room**			X

35.	Is the operator developing and implementing an API 1173 Safety Management System? **Applied for System Operational Achievement Recognition (SOAR) from APGA, didn't score any points for API 1173 so they purchased the API standard and began working to implement SMS in their system**	X		
36.	Are inspection units broken down appropriately? Do you recommend any changes to inspection units? **The system seems small enough for staff to complete the inspection in a reasonable timeframe. No changes recommended.**	X		
37.	Any significant system changes of note? **Uprated part of their system from 42 psig to 60 psig in January 2019. This was done in two steps in order to avoid damage to the gas system. Staff were involved with the uprate and reviewed necessary records (ID 7755)**	X		

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Comments:

PHMSA ADVISORY BULLETINS: LINK

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Attachment 1

A.	Is there potential for damage to pipeline facilities caused by flooding, river scour or channel migration? **Ellensburg has identified 34 creek crossings and 12 ditch/canal crossings. They have identified these areas as low risk in their system but they do monitor the crossings. The crossing are patrolled every other month, Spring is the most likely time for flooding so they perform extra patrols during that time. They look for scouring and flooding.**	X		
B.	If yes to question A, did the operator take appropriate action according to advisory bulletin 2019-01? These actions include: • Using river flow exerts to examine potential for flooding impact, river scour and channel migration. • Evaluate each river crossing installation method to determine if that method is enough to withstand risk posed by flooding, river scour and channel migration. • Determine the maximum flow or flooding condition at rivers where pipeline integrity is at risk in the event of flooding and have contingency plans in place when those conditions occur. • Ensure that pipeline controllers are aware of which pipeline sections are experiencing flooding or high flow conditions and are familiar with contingency plans to shut down and isolate the affected sections. • Evaluate the accessibility of pipeline facilities and components that may be in jeopardy and are needed to isolate the appropriate pipeline sections. • Extend regulator relief vent and relief stacks above the anticipate level of flooding as appropriate. • Coordinate with emergency and spill responders on pipeline locations, crossing conditions and commodity transported. Provide maps and information needed to develop appropriate response strategies. • Coordinate with other pipeline operators in flood areas and establish emergency response centers to act as liaison for pipeline problems and solutions. • Deploy personnel so they will be able to shut down, isolate and contain or perform any other emergency action on the affected pipeline. • Determine if facilities that are normally above ground have become submerged and are in danger of being struck by vessels and debris and if possible, mark such facilities with US Coast Guard approval and appropriate buoy. • Perform frequent patrols to evaluate right of way conditions at water crossings during flooding and after water subsides. Report any flooding to integrity staff to determine if the pipeline crossing has been damaged or would be in imminent jeopardy from future flooding. • Have open communications with local and state officials to address their concerns regarding observed pipeline exposures, localized flooding, ice dams, debris dams and extensive bank erosion that may affect the integrity of the pipeline crossing. • Following flooding, determine if flooding exposed or undermined pipeline because of new river channel profiles • Surveys should be done visually by divers or instrumented detection. Pipeline in recently flooded lands should be evaluated to determine depth of cover. Information should be shared with affected landowners • Ensure that line markers are still in place and replaced in a timely manner. Notify contractors, highway departments and others involved in post flood remediation activities of the presence of the pipeline and the reduced risk caused by loss of cover. **Ellensburg has not identified any issues with river scour or floods damaging pipe or appurtenances.**	X		

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Is there potential for the pipeline to be damaged by earth movement or other geological activities? **Very low risk for landslides and City of Ellensburg has not identified earthquakes as a significant risk in their DIMP**		X	
If yes to the above question, did the operator take appropriate action according to advisory bulletin 2019-02 These actions include: • Identify areas surrounding the pipeline that may be prone to large earth movement, including soil instability, subsidence, frost heave, soil settlement, erosion, earthquakes, and other dynamic geological conditions that may pose a safety risk. • Utilize geotechnical engineers during the design, construction, and ongoing operations of the pipeline system to ensure enough information is available to avoid or minimize the impact of earth movement on the integrity of the pipeline system. At a minimum, information should include soil strength characteristics, ground and surface water conditions, propensity for erosion or scour of underlying soils, and propensity of earthquakes or frost heave. • Develop design, construction, and monitoring plans for each identified location, based on site-specific hazard identified. When constructing new pipelines, develop and implement procedures for pipe and girth weld designs to increase their effectiveness for taking loads, either stresses or strains, exerted from pipe movement in areas where geological subsurface conditions and movement are a hazard to the pipeline integrity. • Monitoring plans may include: o Ensuring during construction of new pipelines that excavators do not steepen load or undercut slopes which may cause excessive ground movement during construction or after operations commence, o Conducting periodic visits and site inspections: increased patrolling may be necessary due to potential hazards identified and existing/ pending weather conditions. Right of way patrol staff must be trained on how to detect and report to appropriate staff the conditions that may lead to or exhibit ground movement. o Identifying geodetic monitoring points to track potential ground movement o Installing slope inclinometers to track ground movement at depth which may otherwise not be detectable during ROW patrols o Installing standpipe piezometers to track changes in groundwater conditions that may affect slop stability. o Evaluating the accumulation of strain in the pipeline by installing strain gauges on the pipeline: o Conducting stress/strain analysis utilizing in-line inspection tools equipped with inertia mapping unit technology and high resolution. o Deformation in-line inspection for pipe bending and denting from movement o Utilize aerial mapping light detection and ranging or other technology to track changes in ground conditions. • Develop mitigation measures to remediate the identified locations.			X

• Mitigation measures should be based on site-specific conditions and may include: o Rerouting the pipeline right of way prior to construction to avoid areas prone to large ground movement such as unstable soil areas, earthquake fault zones, permafrost movement or scour, o Utilize properly designed horizontal drillings (HDD) to go below areas of potential land movement, o Installation of drainage measures in the trench to mitigate subsurface flows and enhance surface water, draining at the site including streams, creeks, runs, gullies or other sources of surface runoff that may be contributing surface water to the site or changing groundwater levels that may exacerbate earth movement, o Installation of drainage measures in the trench to mitigate subsurface flows and enhance surface water drains at the site including streams, creeks, runs, gullies or other sources o surface runoff ten may be contributing surface water to the site or changing groundwater levels that may exacerbate earth movement, o Reducing the steepness of potentially unstable slopes, including installing retaining walls, soldier piles, sheet piles, wire mesh systems, mechanically stabilized earth systems and other mechanical structures, o Installing trench breakers and slope breakers to mitigate trench seepage and divert trench flows along the surface to safe discharge points off the site or right of way, o Building retaining walls and/or installing steel pilings or concrete caissons to stabilize steep slope areas as long as the corrosion control systems are not compromised, o Reducing the loading on the site by removing and/ or reducing the excess backfill materials to off-site locations. Soil placement should be carefully planned to avoid triggering earth movement in other locations, o Compacting backfill mat3rials at the site to increase strength, reduce water infiltration and to achieve optimal moisture content, o Drying the soil using special additives such as lime-kiln dust or cement-kiln to allow the materials to be reused and worked at the site. Oversaturated materials may require an extensive amount of times and space to dry, o Regrading the pipeline right of way to minimize scour and erosion, o Bringing the pipeline aboveground and placing them on supports that can accommodate large ground movements, o Reducing the operating pressure temporarily or shutting in the affected pipeline segment completely, o Rerouting the pipeline when other appropriate mitigation measures cannot be effectively implemented to maintain safety, o If a pipeline has suffered damage or is shut-in as a precautionary measure due to earth movement the operator should notify PHMSA.			X