

November 21, 2017

Mr. Barry Williamson, CAO
Town of Turner Valley
514 Windsor Avenue NW
P.O. Box 330
Turner Valley, AB T0L 2A0

Dear Mr. Williamson:

Subject: Compliance Inspection of the Turner Valley Waterworks System

Alberta Environment and Parks completed a compliance inspection at the above noted Waterworks on November 15th, 2017. At the time of the inspection, the waterworks was required to be in compliance with their waterworks Registration No. 379931, and meeting all the terms and conditions outlined in the *Code of Practice for a Waterworks Systems Consisting Solely of a Water Distribution System (COP)*, as issued under the *Environmental Protection and Enhancement Act (EPEA)*. The inspection was conducted with certified operators Darrell Vercammen and Dennis Leis.

A risk based inspection assessment was completed by Alberta Environment and Parks and the Turner Valley Waterworks passed the assessment and achieved an overall rating of 87%. A copy of the signed inspection assessment as well as the guidelines utilized is enclosed for your records. Please review the comments section for each question as well as the overall inspection summary. This will assist the approval holder in addressing any deficiencies identified during the inspection.

If you have any questions pertaining to this report or require any additional information, please contact me at 403-297-5925 or by email at larry.west@gov.ab.ca.

Yours truly,



Larry West
Environmental Protection Officer

Enclosures (2)

cc: Craig Knaus, District Compliance Manager (Alberta Environment and Parks)
Dennis Leis, Town of Turner Valley

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TOWN OF
TURNER VALLEY

AEP WATERWORKS

INSPECTION REPORT

Waterworks System Name:	Approval Registration #:	Plant classification (Type):
Turner Valley Waterworks System	379931	WD
Approval Holder:	Approval Expiry Date:	Plant classification (Level):
Town of Turner Valley		N/A Level 2
Facility Address:	Facility Location GPS:	Diversion Location GPS:
Street: PO Box 33 - 514 Windsor Ave. NW	Latitude: (e.g. 51.1235)	Latitude: (e.g. 51.1235)
Province: AB Town: Turner Valley Postal Code: T0L 2A0	Longitude: (e.g. -114.2168)	Longitude: (e.g. -114.2168)
Facility Contact Number: 403 - 933 - 4944	Water Diversion Licence No.:	Municipal/Industrial Facility:
Facility Emergency Contact Number: 403 - 899 - 5133	Through the works of SRRUC	Municipal
Operator's Name: (Interviewed only)	Source:	Daily Peak Flows (m3):
Darrel Vercammen & Dennis Leis	SRRUC WTP	16996 m3/month
Operator's Certification Level: (Interviewed only)	Population served:	Number of Connections:
WT Level 2 WD Level 2	~ 2500	unknown
Inspector's Name:	Renewal Application Submitted (yes/no):	Daily Average Flows (m3):
Larry.West@gov.ab.ca SSR-Calgary	no	16000 m3/month
Inspection Number:	Date and Time of Inspection:	Date of previous Inspection:
November 2017	Wednesday, November 15, 2017 09:00 <input checked="" type="radio"/> am <input type="radio"/> pm	
Short Term Approval Conditions		
A. Are there any Short-Term Approval Conditions?	<input checked="" type="radio"/> NO <input type="radio"/> YES (If YES, answer B & C)	
B. What are the required due dates?	n/a	
C. Have these Conditions been achieved?	n/a	
D. Have there been any changes to the waterworks system since the last AEP inspection?	n/a	
Comments:		
This the first time registration #379931 has been inspected as it is a new registration dated July 2016.		

PRIMARY RISK ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS
1 Is the operator certification (including back-up operators) appropriate for this facility?	<u>4 - Excellent</u>	Three level II operators are working for the Town of Turner Valley, Dennis Leis, Darrell Verccammen and Terry Novak all of which are WT II/WD II certified. A level II operator is at the WTP 7 days a week and they check the distribution system 5 days a week.
2 Have Approval/Code of Practice/Potable Water Regulation contraventions been properly reported?	<u>4 - Excellent</u>	At the time of the inspection no contraventions had been reported to AENV under the new registration. the operators stated that the water system is in very good shape and no water main breaks have occurred that caused the system to be depressurized.
3 Is monitoring equipment (includes portable, bench top, and continuous on-line meters) used to verify compliance properly maintained and calibrated?	<u>4 - Excellent</u>	Hach is brought in annually to calibrate the meters and were last at the plant in September 2017. Hach calibrates both the bench top and on-line analyzers (including the Swan CL2 analyzers at the WTP). There isn't a chlorine residual analyzer at the reservoir in Turner Valley.
4 Were emergency situations dealt with as required by the Approval, Code of Practice (COP), or legislation?	<u>4 - Excellent</u>	No emergencies have occurred in the Turner Valley Water Distribution system since the last AENV inspection.
5 Are treated water turbidity (prior to entering clear well reservoir) limits met?	<u>N/A</u>	
6 Are chlorine/ozone residual and contact time (CT) ration requirements met entering the distribution system at the point where CT is achieved?	<u>N/A</u>	
7 Are UV disinfection approval requirements met (Typically includes UV reactor flow limits, UV transmittance (%T) limits and UV dose limits)?	<u>N/A</u>	
8 Are Approval/Code of Practice (COP) chlorine residual (in the distribution system) limits met?	<u>4 - Excellent</u>	In 2016 the range of reported free chlorine residuals varied from 0.30 - 1.01 mg/L. In 2017 to date the range of free residuals varied from 0.19 - 0.96 mg/L. operators check chlorine in the distribution system 5 days a week. The operators use 14 sample sites in summer and 10 in the winter for chlorine residual monitoring.
9 Is monitoring frequency for treated water bacteriological sampling in the distribution system being met?	3 - Good	One sample per week is collected from the Turner Valley distribution system using the same sample sites as for chlorine residual monitoring.
PRIMARY RISK ASSESSMENT TOTAL:	23	Sum of ratings

PRIMARY RISK ASSESSMENT RATING:

95

Average rating of Applicable questions (in %)

PRIMARY RISK ASSESSMENT:

PASS

PASS requires a 3 or 4 Rating for all applicable questions

SECONDARY RISK ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS
10 Is the approval/Code of Practice holder diligent in ensuring that all bacteriological sampling is done properly?	<u>3 - Good</u>	No bacteriological sampling problems were identified during the inspection. A Bacteriological Quality Monitoring Plan needs to be compiled that includes a map of the water distribution system and the location of the sampling sites.
11 Are operators familiar with the current signed Approval or Registration and related legislation for the waterworks system?	<u>4 - Excellent</u>	The operators had a copy of the Code of practice on hand and seemed very knowledgeable of the content.
12 Are raw water wells located, protected and maintained in a sanitary manner (including Groundwater Under Direct Influence Systems)?	<u>N/A</u>	
13 What raw surface water protection measures are in place to optimize water quality entering the Water Treatment Plant?	<u>N/A</u>	
14 Are Water Treatment chemicals used to the facility listed and used as specified?	<u>N/A</u>	
15 Are system water volumes metered?	<u>4 - Excellent</u>	Water is metered from the WTP into the distribution system, but is not metered out of the reservoir. however all the services are metered and water audits are conducted to determine water losses.
16 Have preventative maintenance measures been established in the distribution system and treated water reservoir(s) to minimize adverse effects to water quality?	<u>3 - Good</u>	Valve exercising is done and operators attempt to do as many as possible each year. hydrant flushing is done but not Unidirectionally from the reservoir outward. hydrants are flowed and pressure tested. There is not a truck fill in Town. The reservoir was last inspected in 2014 and is planned to be done every 5 years. Cross connection control inspections are done on a very limited basis as the system is designed to have water and wastewater lines well away from each other.
17 Were treated water sample(s) taken as required, for all listed parameters and analyzed by an independent lab accredited for all the parameters analyzed?	<u>3 - Good</u>	Additional testing is required under the registration for a full list of parameters. These tests are done twice a year as per the requirements. Results are included in the annual report.

SECONDARY RISK ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS
18 Does treated water meet the Guidelines for the Canadian Drinking Water Quality (GCDWQ) parameters based on the sampling required for the facility?	<u>4 - Excellent</u>	According to the operators and reports reviewed by AENV water quality met the Health Canada guidelines and no exceedances of the MAC's were noted.
19 Were reports (monthly and annual) properly compiled and submitted on time?	<u>4 - Excellent</u>	The 2016 annual report was reviewed for the inspection. No copy of the annual report was found under registration 379931 it had been filed under approval 1242. Please ensure the annual reports are submitted separately in the future. The 2016 annual report contained the required information (from July onward). Monthly electronic reporting is being done.
20 Are treated water fluoride concentration limits and monitoring requirements met?	N/A	
21 Are filter(s) effluent turbidity monitoring (entering clear well reservoir) requirements met?	N/A	
22 Are treated water chlorine residual monitoring (entering distribution system at the point where CT's have been achieved) Approval/COP requirements met?	N/A	
23 Are treated water chlorine residual monitoring (in the distribution system) requirements met?	<u>3 - Good</u>	5 day a week monitoring is being done by the operators in the Town of Turner Valley.
24 Is the Operations Program completed as per the Approval/Code of Practice?	<u>3 - Good</u>	The operations program had been developed and was submitted with the 2016 annual report. A review and refinement of the document is recommended - see Section 4.8 Pipeline break and repair. Operator signoff is also recommended.
25 Is the Drinking Water Safety Plan completed as per the Approval/COP?	<u>2 - Fair</u>	The DWSP hadn't been updated in the past year. this was reported as a contravention.

SECONDARY RISK ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS
26 Are the data results of the on-line or continuous monitoring equipment (applies only to turbidity meters and/or chlorine/ozone residual meters) validated to ensure that the results reflect actual quality of the water (some examples of erroneous data results are when air bubbles in the turbidity meter influence the readings or with reduced/increased flow through the chlorine residual monitor)?	N/A	
SECONDARY RISK ASSESSMENT TOTAL:		Sum of Ratings
SECONDARY RISK ASSESSMENT RATING:	83	Average rating of applicable questions (in %)
Overall Waterworks Rating:	87	Overall rating of both Primary and Secondary (in %)
Overall Waterworks System Risk Assessment:	PASS	PASS requires PASS of both Primary and Secondary Assessments

INSPECTION SUMMARY:

**Overall the inspection passed AENV's risk based inspection assessment and achieved an rating of 87%.
Please review the comments section for each of the 26 questions as it will detail any deficiencies identified and assist the approval holder in achieving a higher score in future inspections.
Question 25 was rated as fair the remainder either good or excellent.**

Any rating of 1 or 2 may indicate a contravention of the Environmental Protection and Enhancement Act and /or applicable Regulations. You should immediately take all necessary steps to comply with the above. Within thirty (30) days of this audit, you are requested to provide a written response as to how the above noted contraventions were remedied.

INSPECTION SUMMARY:

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Inspector's
Signature:

Jay West

Date:

Nov. 15/17

Operator's
Signature (at
time of
inspection:

D.F. Vercauteren

Date:

Nov 15/17

Other Approval
Holder
Representative
Signature:

KOL

Date:

Nov 15/17