

## Waterworks Compliance Inspection - Human Consumptive Use (Part I)

**System Name:** EARL GREY WATERWORKS      Remote Inspection ID: 1208018  
**Approval No:** 00002153-05-00  
**Population:** 229      **Announced:** Yes  
**Date:** 18-MAY-2023 09:30      **Person Interviewed:** HUBER, COURTNEY

### General Section

**Water Supplies in Service :** GROUNDWATER      **System Classification:** ONE WT ONE WD  
**# of Service Connections:** 140      **System Type:** MUNICIPAL SYSTEM  
**Service Connection Metering:** Yes      **Source Inspection Completed:** No  
**Comments:**

### Contacts

| Name             | Position                      | Phone / Fax                                   | Email                           |
|------------------|-------------------------------|---|---------------------------------|
| HUBER, COURTNEY  | ADMINISTRATOR                 | Phone: (306) 939-2062<br>Cell: (306) 540-7097 | EARLGREYVILLAGE@SASKTEL.NET     |
| OLLINGER, CORLEY | OPERATOR                      | Phone: (306) 718-7040                         | EARLGREYFOREMAN@SASKTEL.NET     |
| REGINA, SHA      | OTHER - HEALTH REGION         | Phone: (306) 766-7755                         | ENVIRONMENTALHEALTH@RQHEALTH.CA |
| HODGES, NEIL     | ENVIRONMENTAL PROJECT OFFICER | Cell: (306) 630-6045                          | NEIL.HODGES@WSASK.CA            |
| NIXON, MITCHEL   | UNCERTIFIED OPERATOR          | Cell: (306) 718-7447                          | N/A                             |
| HORNUNG, KEN     | UNCERTIFIED OPERATOR          | Cell: (306) 551-3190                          | N/A                             |
| MOHR, TRISTIAN   | CERTIFIED OPERATOR            | Cell: (306) 726-7638                          | N/A                             |

### **Comments:**

TRISTIAN MOHR IS A BACK UP OPERATOR FOR EARL GREY WHEN NEEDED

**Operator Certification Section**

| Operator Name    | Certification Levels |                 | Expiry Date | Operator is a Supervisor |
|------------------|----------------------|-----------------|-------------|--------------------------|
|                  | Water Distribution   | Water Treatment |             |                          |
| OLLINGER, CORLEY | SMALL SYSTEMS        | SMALL SYSTEMS   | 15-JAN-2024 | Yes                      |
| MOHR, TRISTIAN   | ONE                  | ONE             | 15-SEP-2023 | Yes                      |

**Test Results**

| Station #  | Sample ID  | Location/Comments                     | Variable         | Flag       | Measurement | Qualifier |
|------------|------------|---------------------------------------|------------------|------------|-------------|-----------|
| SK05JK0003 | 2023088038 | WTP                                   | CHLORINE (FREE)  | N/A        | 0.830 mg/l  | N/A       |
|            |            |                                       | CHLORINE (TOTAL) | N/A        | 1.320 mg/l  | N/A       |
|            |            |                                       | MANGANESE TOTAL  | N/A        | 0.072 mg/l  | N/A       |
|            |            |                                       | TURBIDITY        | N/A        | 0.110 NTU   | N/A       |
|            | 2023088039 | 212 MAIN STREET TOWN OFFICE           | CHLORINE (FREE)  | N/A        | 0.780 mg/l  | N/A       |
|            |            |                                       | CHLORINE (TOTAL) | N/A        | 1.220 mg/l  | N/A       |
|            |            |                                       | TURBIDITY        | N/A        | 0.080 NTU   | N/A       |
|            | 2023088040 | 216 ASSINIBOIA AVE OLLINGER RESIDENCE | CHLORINE (FREE)  | N/A        | 0.720 mg/l  | N/A       |
|            |            |                                       | CHLORINE (TOTAL) | N/A        | 1.170 mg/l  | N/A       |
|            |            |                                       | TURBIDITY        | N/A        | 0.120 NTU   | N/A       |
|            | 2023088041 | 109 ASSINIBOIA AVE VET CLINIC         | CHLORINE (FREE)  | N/A        | 0.750 mg/l  | N/A       |
|            |            |                                       | CHLORINE (TOTAL) | N/A        | 1.210 mg/l  | N/A       |
|            |            |                                       | TURBIDITY        | N/A        | 0.140 NTU   | N/A       |
|            | 2023088042 | RM SHOP                               | CHLORINE (FREE)  | N/A        | 0.720 mg/l  | N/A       |
|            |            |                                       | CHLORINE (TOTAL) | N/A        | 1.190 mg/l  | N/A       |
| TURBIDITY  |            |                                       | N/A              | 0.280 NTU  | N/A         |           |
| N/A        | WTP SPLIT  | CHLORINE (FREE)                       | N/A              | 0.810 mg/l | N/A         |           |
|            |            | CHLORINE (TOTAL)                      | N/A              | 1.300 mg/l | N/A         |           |
|            |            | TURBIDITY                             | N/A              | 0.110 NTU  | N/A         |           |

**Equipment Validation**

**Turbidity**

| Equipment Type                 | Equipment Name/Number | STD1(L)<br>(Expected, Test) | STD2<br>(Expected, Test) | STD3<br>(Expected, Test) | STD4<br>(Expected, Test) | Result | Gel Standard |
|--------------------------------|-----------------------|-----------------------------|--------------------------|--------------------------|--------------------------|--------|--------------|
| HACH 2100Q                     | 1                     | (10.00, 9.84)               | (20.00, 18.70)           | (100.00, 93.60)          | (800.00, 753.00)         | GOOD   | N/A          |
| <b>Comment</b>                 |                       |                             |                          |                          |                          |        |              |
| LAST SERVICED ON DECEMBER 2022 |                       |                             |                          |                          |                          |        |              |

**Chlorine**

| Equipment Type                 | Equipment Name/Number | STD1<br>(Expected, Test) | STD2<br>(Expected, Test) | STD3<br>(Expected, Test) | Result |
|--------------------------------|-----------------------|--------------------------|--------------------------|--------------------------|--------|
| DR900                          | 1                     | (0.17, 0.17)             | (0.88, 0.85)             | (1.46, 1.45)             | GOOD   |
| <b>Comment</b>                 |                       |                          |                          |                          |        |
| LAST SERVICED ON DECEMBER 2022 |                       |                          |                          |                          |        |

**Human Consumptive Regulatory Section**

C=Compliant NC=Non-Compliant N/A=Not Applicable

| C | NC | NA | General  | Comments  |
|---|----|----|--|---|
| X |    |    | Valid permit to operate and/or construct EMPA2010 24(1)      |   |
| X |    |    | Certified operator WWSW 62                                   |   |
| X |    |    | Valid water rights license EMPA2010 29(1)                    | WELL #4 - WR# 2608 WELL #5 (POLLARD #1) - WR# 3479 WELL #1 - ABANDONED - WR# 0358   |
| X |    |    | Copy of permit posted at waterworks EMPA2010 29(1)           |   |
|   |    |    | <b>Wells</b>   |   |
| X |    |    | Constructed to exclude contaminants WWSW 22(2)               | BOTH WELLS 4 AND 5 ARE LOCTAED ON THE LOW-SPOTS, PLEASE TAKE NECESSARY STEPS TO ALLOW SURFACE RUNOFF DRAIN AWAY FROM THE WELLS AND TO PREVENT WATER PONDING AROUND THE WELLS. WELL #1 - ABANDONED - WR# 0358. PLEASE DECOMMISSION ANY WELLS THATS NOT IN USE OR LEFT ABANDONED. THE VILLAGE DECOMMISSIONED THE OLD WELL (WELL #2) NOVEMER 1ST 2020. |
| X |    |    | Disinfection of new lines & repairs WWSW 22(2)(f)            |   |
|   |    |    | <b>Distribution System</b>                                   |   |
| X |    |    | Common trenching WWSW 23(1)(2)                               | WATER AND SEWER MAINS IN SEPARATE TRENCHES  |
| X |    |    | Disinfection of new and repaired pipelines WWSW 23(4)& 27(4) |   |

|   |   |  |  |  |
|---|---|--|--|--|
|   |   |  | <b>Water Storage Reservoirs</b>  |  |
| X |   |  | Water tight cover WWSW 24(2)(a)  |  |
| X |   |  | In good repair WWSW 24(2)(b)   | RESERVOIRS WERE CLEANED IN MAY 2021.RECOMMEND CLEANING THE RESERVOIR EVERY 3-5 YEARS.  |
| X |   |  | Meets reservoir design requirements (only applies to facilities constructed after June 1, 2015) WWSW 24(2)(c)  |  |
| X |   |  | Manholes (all manholes must be 150mm above grade, designed and maintained to prevent the entry of water, and locked if located outside WTP) WWSW 24(3)(4). |  |
| X |   |  | Pipe entries installed to prevent contamination WWSW 24(5)   |  |
| X |   |  | Vents WWSW 24(6)   | NEW VENT INSTALLED ON THE OUTSIDE RESERVOIR LID IN JUNE 2022.  |
|   |   |  | <b>Water Treatment Plants and Pumphouses</b>   |  |
| X |   |  | Floor drainage to drains or sumps WWSW 25(a)   |  |
| X |   |  | Drain lines to sanitary sewers have trap WWSW 25(b)  |  |
| X |   |  | Backflow prevention device on treatment component WWSW 25(c)   |  |
| X |   |  | Water meter(s) installed in WTP or pumphouse WWSW 25(d)  |  |
| X |   |  | Adjustable chemical feeder WWSW 25(e)  |  |
| X |   |  | Water quality monitoring and testing equipment is maintained and calibrated as recommended by manufacturer EMPA2010 29(1)                                  | HACH 2100 WAS LAST CALIBRATED ON DECEMBER 2022. HACH 2100 Q (TURBIDIMETER) MUST BE CALIBRATED QUARTERLY AND VERIFIED WEEKLY. PLEASE CALIBRATE THE INSTRUMENT IMMEDIATELY. VERIFICATIONS ARE DONE WEEKLY AND ARE LOGGED ON THE DAILY LOG SHEETS. PLEASE INCLUDE THE READINGS OF CALIBRATIONS AND VERIFICATIONS ON THE LOG SHEET.  |
| X |   |  | Facility is clean and in orderly condition WWSW 25(f)  |  |
|   | X |  | NSF/ANSI 60 Approved chemicals being used and at or below Max. use limit (unless otherwise approved) WWSW 27(3)  | MAXIMUM USE LEVEL FOR SODIUM HYPOCHLORITE (CHLORINE) USAGE IS EXCEEDED. DURING INSPECTION, CHECKED MARCH 2022 - 201.73 MG/L AND AUGUST 23, 2022 - 176.8 MG/L. THE MAXIMUM USE LEVEL FOR SODIUM HYPOCHLORITE IS 103 MG/L. THE WATER TREATMENT PLANT REQUIRES AN ELEVATED CHLORINE DOSAGE IN ORDER TO EFFECTIVELY DISINFECT THE WATER. IN ORDER TO COME INTO COMPLIANCE UPGRADES TO THE WATER FACILITY ARE REQUIRED TO ADDRESS THE AMMONIA IN THE RAW WATER. |
|   |   |  | <b>Disinfection</b>  |  |

|   |   |  |   |   |
|---|---|--|---|---|
| X |   |  | Continuous chlorine disinfection (unless otherwise approved per 27(7)) WWSW 27(5)   |   |
| X |   |  | A free chlorine residual of not less than 0.1 mg/L in water entering the distribution system WWSW 27(6)(a)  |   |
| X |   |  | A total chlorine residual of not less than 0.5 mg/L OR a free chlorine residual of not less than 0.1 mg/L in water throughout the distribution system WWSW 27(6)(b) |   |
|   |   |  | <b>Standards</b>  |   |
| X |   |  | Bacteriological WWSW 29   |   |
| X |   |  | Chemical standards WWSW 26(2)(3) & 31   | GEN CHEM HIGH ON TOTAL ALKALINITY, HARDNESS, SULPHATES AND TDS. THM RESULT WAS 90.1UG/L HEALTH AND TOX GOOD   |
| X |   |  | Waterworks meets the requirements of future chemical health and pesticide related standards   |   |
|   |   |  | <b>Groundwater</b>  |   |
|   | X |  | Less than or equal to 1.0 NTU discrete measurements (95%) WWSW 30(2)(e)(i)  | ON DECEMBER, 2022, TURBIDITY WAS ABOVE 1 NTU FOR THE WATER ENTERING THE DISTRIBUTION SYSTEM FOR FIVE DAYS. THIS WAS REPORTED TO WSA. AS PER THE PTO, TURBIDITY OF THE WATER ENTERING THE DISTRIBUTION SYSTEM MUST BE LESS THAN 1.0 NTU, 95% OF DISCRETE MEASUREMENTS EACH CALENDAR MONTH. |
|   |   |  | <b>Assessment</b>   |   |
| X |   |  | Proper waterworks assessment WWSW 32  |   |
|   |   |  | <b>Operational Anomalies</b>  |   |
| X |   |  | Reported upset condition WWSW 34(1)   | PLEASE CONTINUE TO REPORT ALL WATER MAIN BREAKS/REPAIRS TO THE WSA. REPORTED HIGH TURBIDITIES TO WSA IN DECEMBER 2022   |
| X |   |  | Reported disinfection system upset WWSW 34(2)(a)(b)   | PLEASE CONTINUE TO REPORT ANY TIME THE WATER TREATMENT FACILITY LOSES BREAKPOINT CHLORINATION, TO THE WSA.  |
| X |   |  | Reported missing on-site water quality testing records WWSW 34(2)(c)  |   |
|   |   |  | <b>Testing</b>  |   |
| X |   |  | Bacteriological testing WWSW 37(2)  |   |
| X |   |  | Bacteriological follow-up WWSW 37(5) & 37(9)  |   |
| X |   |  | Bacteriological sample after completion, alteration, extension or repair WWSW 38  |   |
| X |   |  | Chlorine monitoring WWSW 37(2)(4)   |   |
| X |   |  | Turbidity monitoring WWSW 37(2)(4)  |   |
|   |   |  | <b>Other Constituents</b>   |   |
| X |   |  | General chemical sampling conducted WWSW 37(2)(6)   | LAST SAMPLE WAS SUBMITTED ON JANUARY 17, 2023 NEXT DUE IN 2025.   |
| X |   |  | Health and toxicity sampling conducted WWSW 37(2)(6)  | LAST SAMPLE WAS SUBMITTED ON JANUARY 17, 2023 NEXT DUE IN 2025.   |

|   |  |  |   |  |
|---|--|--|---|--|
| X |  |  | Trihalomethane sampling conducted WWSW 37(2)(6)   | SINGLE THM TAKEN IN JANUARY 2023. RESULT WAS 90.1UG/L WHICH IS LESS THAN THE MAX OF 100UG/L  |
| X |  |  | Accredited laboratory WWSW 37(2)(b)   |  |
|   |  |  | <b>Operational Records</b>  |  |
| X |  |  | Daily water meter reading WWSW 40(1)(a)   |  |
| X |  |  | Types, dosages and total amounts of chemical WWSW 40(1)(b)  |  |
| X |  |  | Samples - locations, sampler, and results WWSW 40(1)(c)   |  |
| X |  |  | Abnormal operating procedures WWSW 40(1)(d) & 40(1)(e)  |  |
| X |  |  | Upset conditions (includes water treatment facility and water distribution system upsets) WWSW 40(1)(f) |  |
| X |  |  | Chlorine upsets WWSW 40(1)(g)   |  |
| X |  |  | Calibration records for test equipment WWSW 40(1)(h)  | PLEASE CALIBRATE THE TURBIDIMETER QUARTERLY AND VERIFY WEEKLY AS PER MANUFACTURER SPECIFICATIONS. PLEASE DOCUMENT THE READINGS IN A SEPARATE CALIBRATION/VERIFICATION LOG-SHEET.   |
| X |  |  | Maintenance WWSW 40(1)(i)   |  |
| X |  |  | Chronological order WWSW 40(2)(a)   |  |
| X |  |  | Permittee recorder WWSW 40(2)(b)  |  |
| X |  |  | Identification of recorder WWSW 40(2)(c)  |  |
| X |  |  | Five year history of log WWSW 40(2)(d)  |  |
| X |  |  | Explanatory notes WWSW 40(2)(e)   |  |
| X |  |  | Factual data entry WWSW 40(2)(f)  |  |
| X |  |  | No default values used WWSW 40(2)(g)  |  |
|   |  |  | <b>QA/QC and Recordkeeping Review</b>   |  |
| X |  |  | QA/QC and ERP in place WWSW 41(1)   | THE ERP HAVE BEEN UPDATED. WORKING ON UPDATING THE QA/QC. PLEASE ADD THE CORRECT YEAR FOR REFERENCE WHEN UPDATING. PLEASE PROVIDE A COPY OF UPDATED QA/QC AND ERP TO THE EPO.  |
| X |  |  | Monthly review of records by permittee WWSW 41(2)   | PLEASE CONTINUE TO REVIEW, SIGN AND DATE THE RECORDS MONTHLY BY COUNCIL OR A DESIGNATED COUNCILOR. PLEASE MAKE SURE YOU UNDERSTAND WHAT YOU ARE SIGNING OFF ON WHEN IT COMES TO THE MONTHLY RECORDS REVIEW. THESE ARE LEGAL DOCUMENTS. |
| X |  |  | Report abnormal or missing records WWSW 41(3)   |  |
|   |  |  | <b>Annual Notice To Customers</b>   |  |
| X |  |  | On water quality and sample submission compliance WWSW 42(1)  | 2021 ANNUAL NOTICE TO CONSUMERS WAS COMPLETED ON JUNE 02, 2022.  |
| X |  |  | Written notice provided to Minister of completion of annual notice to consumers WWSW 42(2)              | A COPY OF THE 2021 ANNUAL NOTICE TO CONSUMERS WAS PROVIDED TO THE EPO.   |

|   |  |  | General  |   |
|---|--|--|--|---|
| X |  |  | Split sampling with the operator was completed                         |   |
| X |  |  | Operator's test equipment appears to be performing adequately          | EQUIPMENT SHALL BE SERVICED AS PER MANUFACTURER'S SPECIFICATIONS. |
| X |  |  | Representative of the waterworks signature was obtained                | YES   |
| X |  |  | Representative of the waterworks agreed with the inspection statements | YES   |



**(Operator/Supervisor Signature)**



**Agree with statements**



**(EPO Signature)**