



Public Works – Water Division

Form

Doc. #: QP FORM 0764
Issued: 14-Oct-2014
Revised: 24-Dec-2018
Revision #: 5.1
Page: 1 of 2

Approved by: Top Management – Tier 2

0764 – Continuous Feed Method Watermain Disinfection

Initial Form - first form submission
Subsequent Form - continuing action [disinfection / sampling failed]

All work must be performed in accordance with [QP SOP 1109](#), [1111](#) or [1709](#), [QP FORM 0776](#) & related documents & standards

Company Performing Disinfection (Contractor or Peel): _____ Project #: _____

Location: _____ Peel Project Manager: _____

Peel Inspector: _____ Consultant Inspector: _____

COMPANY PERFORMING DISINFECTION (Contractor or Peel) to complete Sections A, B & C and page 2 in FULL

For Disinfection Contractor Use Only (*for all certified Operators)

Initial Flushing (before chlorination) Swabbed: Y / N by: (Company) _____ Date (dd/mm/yy): _____

Chlorine residual of the water fed into the watermain: Free: _____ mg/L Total: _____ mg/L

Achieved flushing velocity of at least 0.91 m/sec OR Flushed minimum 3 pipe volumes (check ONE)

Post-flush turbidity ^a: _____ NTU ^a Must be ≤1.0 NTU. If so, proceed with disinfection. If turbidity >1.0 NTU, test source.

Source turbidity ^b: (If applicable) NTU ^bIf source turbidity ≤1.0 NTU, continue flushing. If source turbidity >1.0 NTU, proceed with disinfection

A

Water Meter Readings (m³) Initial: _____ Final: _____ Water Used: _____

| | Name (print) | Signature | Initials | *OWWCO Operator # |
|----------------------|--------------|-----------|----------|-------------------|
| Operator in Charge | | | | |
| Operator/Assistant 1 | | | | |
| Operator/Assistant 2 | | | | |

Disinfection - Continuous Feed Method Final meter reading Section A must be the same as Initial meter reading Section B! Do not reset digital meter! Date (dd/mm/yy): _____

Water Meter Readings (m³) Initial: _____ Final: _____ Water Used: _____

Meets minimum requirement of 50 mg/L Time (24:00): _____ (i.e. time **LAST** sample point residual was measured)

B

| | Name (print) | Signature | Initials | *OWWCO Operator # |
|----------------------|--------------|-----------|----------|-------------------|
| Operator in Charge | | | | |
| Operator/Assistant 1 | | | | |
| Operator/Assistant 2 | | | | |

After Contact Time/Final (dechlorination) Flush Date (dd/mm/yy): _____ Time (24:00): _____ Min 24hr? [▲] (Y / N)

Final meter reading Section B must be the same as Initial meter reading Section C [▲] Time (1st sample point) must be ≥ 24hr after **LAST** Time in Section B

Water Meter Readings (m³) Initial: _____ Final: _____ Water Used: _____

Maximum allowable decrease[†] of total chlorine residual is 40% of initial chlorine (to a max of 50 mg/L), before flushing:

[†] a chlorine increase >5% is a FAIL COPPER* (*see note below Page 2 table) PASS FAIL[†]

C

If residuals **PASS**, proceed to flushing After Flush residuals are recorded on Page 2

After flush, residual at all locations is representative of local distribution [▲] Must be independently collected from and before micro sampling

Discharge of water to the environment must comply with Municipal Drinking Water Licence Schedule C Condition 4.5

| | Name (print) | Signature | Initials | *OWWCO Operator # |
|----------------------|--------------|-----------|----------|-------------------|
| Operator in Charge | | | | |
| Operator/Assistant 1 | | | | |
| Operator/Assistant 2 | | | | |

CONTRACTOR: Hand over this Form to Region of Peel Operations Staff

Verification Sampling (Microbiological) All sampling must be performed in accordance with [QP SOP 1107](#)

D

| | Date (dd/mm/yy) | Time (24:00) | Sampler(s) | Employee #(s) | OIC Signature |
|-------------------|-----------------|------------------------|------------|---------------|---------------|
| "Initial" Samples | | last sample collected | | | |
| "16-hr" Samples | | first sample collected | | | |

Approval to Connect to Distribution System Maxxam Job# (Initial): _____ Maxxam Job# (16-hr): _____

All sample results have been reviewed Date results reviewed (dd/mm/yy): _____

Results are within regulatory limits and pass Peel Standards (per [QP PROT 0515](#)) PASS FAIL[#]

[#] If any sample result fails, Foreperson direction is (check all that apply): Flush Swab Sample Disinfect

E

Signature below signifies that the entire form was reviewed, and all Sections pass requirements.

Approval is given to connect the watermain to the distribution system

| | Name (print) | Signature - PASSED | Signature - FAILED |
|------------|--------------|--------------------|--------------------|
| Foreperson | | | |

[▲] If **DISINFECTION** fails, start another 'Watermain Disinfection Form', check 'Subsequent Form' box (top) & complete sections **A, B, C, D, E**
[#] If **SAMPLING** fails, start another 'Watermain Disinfection Form', check 'Subsequent Form' box (top) & complete sections as per Foreperson direction

OPERATIONS STAFF: Scan a copy of this form to the Region of Peel Project Manager, Disinfection Contractor, Inspector, ZZG-DWQMS and ZZG-WaterQualityInquiries

| Location | Disinfection (Section B) | | | | After "Post" Contact Time (before final flush) (Section C) | | | | | | After Final (dechlorination) Flush (Section C) <i>Residuals must be independently collected (i.e. before) microbiological sampling</i> | | | | |
|----------|--------------------------|-----------------|-----------------------------|----------|--|-----------------|-----------------------------|---|---|----------|---|-----------------|-----------------|-------|----------|
| | Date (dd/mm/yy) | Time (24:00) | Total Chlorine (mg/L) | Initials | Date (dd/mm/yy) | Time (24:00) | Total Chlorine (mg/L) | Chlorine DECREASE [†] * (mg/L) [= Initial - Post] | Chlorine DECREASE (%) [†] [= (Initial - Post) ÷ Initial x 100%] | Initials | Date (dd/mm/yy) | Time (24:00) | Chlorine (mg/L) | | Initials |
| | | | | | | | | | | | | | Free | Total | |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | |

All chlorine measurements must be performed using calibrated digital testing equipment.

*Due to chlorine demand exerted by copper, no minimum chlorine concentration is required following the 24-hour contact time for copper pipes. [Ministry *Watermain Disinfection Procedure*, Section 1.1.1]

Review and Revision History

| Date | Revision # | Reason for Revision |
|-------------|------------|--|
| 14-Oct-2014 | 0.0 | Original Issue |
| 26-Aug-2015 | 1.0 | Revised based upon approved Staff Suggestion, compliance requirements, and formatting improvements |
| 13-Oct-2015 | 1.1 | Revised based upon staff input from first uses of version 1.0 in the field. Direction added for paperwork flow. |
| 11-Oct-2016 | 2.0 | Revised per new 'MOECC Watermain Disinfection Procedure'; added OWWCO Operator # (For Contractor Use Only); added section letters, checkbox at top INITIAL vs SUBSEQUENT, moved direction in event of failure to a footnote, added checkbox for SWABBED to Section A, added Continuing Actions options to Section E, Clarified direction to PM at very bottom. |
| 25-Jul-2017 | 3.0 | Section C: added note chlorine increase is a FAIL. Section C: added checkbox for Copper. Table: added asterisks on 2 headers and a footnote about copper. |
| 08-Sep-2017 | 3.1 | Adjusted form title and edited grey note above Section A. Added "/Assistant" for contractor use in Sections A,B,C and shaded OWWCO# column. Adjusted recipients in highlighted directions at bottom of Page 1. |
| 14-Feb-2018 | 4.0 | Added flushing velocity or 3 volumes to Section A. Added post-flush turbidity limit to Section A. Added signature for approval to connect to system in Section E. Mandated use of digital chlorine test equipment. |
| 10-Oct-2018 | 5.0 | Added note regarding water meter reading requirements (continuous readings – cannot reset), clarified note on post-flush turbidity limit, updated formatting to chlorine residuals table on page 2 and added Disinfection Contractor as recipient of scanned FORM once completed. |
| 24-Dec-2018 | 5.1 | Updated footer and changed titled to document history section. |