

Ministry of the Environment,  
Conservation and Parks

Ministère de l'Environnement, de la  
Protection de la nature et des Parks

Southwestern Region

Direction régionale du Sud-Ouest

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File# SI-ES-TE-540

January 30, 2020

Town of Tecumseh  
917 Lesperance Road  
Tecumseh, ON  
N8N 1W9

Attention: Margaret Misek-Evans, CAO  
[mevans@tecumseh.ca](mailto:mevans@tecumseh.ca)

Dear Ms. Misek-Evans;

Re: Tecumseh Water Distribution System  
Inspection Report

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Please find enclosed the Drinking Water System Inspection Report for the Tecumseh Distribution System (DWS#260004969). There was no physical inspection conducted at your drinking water system this year, however, the inspection was conducted remotely as part of the ministry's new "Remote Inspection Pilot" project. During this year's inspection, a telephone interview/questionnaire was conducted on January 16, 2020.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "*Taking Care of Your Drinking Water: A guide for members of municipal council*" found on the Drinking Water Ontario website at [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater).

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation & Enforcement (II&E) Secretariat and advice of internal/external risk experts. The Inspection Summary Rating

Record (IRR), included as Appendix B of the inspection report, provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance.

IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspectors' Annual Report. If you have any questions or concerns regarding the rating, please contact Marc Bechard, Water Compliance Supervisor, at (519) 490-0761.

Likewise, if you have any questions or concerns regarding this report, please call me at (226) 280-1556.

Yours truly,



Neil Gilbert, P.Eng.  
Provincial Officer – Water Inspector  
Southwestern Region  
Ministry of the Environment, Conservation and Parks  
Sarnia District – Windsor Area Office

Encl.

cc: Dr. Wajid Ahmed, Acting Medical Officer of Health, Windsor-Essex County HU, [wahmed@wechu.org](mailto:wahmed@wechu.org)  
Theresa Marentette, CEO and Chief Nursing Officer, Windsor-Essex County HU, [tmarentette@wechu.org](mailto:tmarentette@wechu.org)  
Phil Wong, Manager, Environmental Health, Windsor-Essex County HU, [pwong@wechu.org](mailto:pwong@wechu.org)  
Victoria Peczulis, Manager, Environmental Health, Windsor-Essex County HU, [vpeczulis@wechu.org](mailto:vpeczulis@wechu.org)  
Phil Bartnik, Director of Public Works & Env. Services, Town of Tecumseh, [pbartnik@tecumseh.ca](mailto:pbartnik@tecumseh.ca)  
Brad Dupuis, Water & Wastewater Manager, Town of Tecumseh, [bdupuis@tecumseh.ca](mailto:bdupuis@tecumseh.ca)  
Marc Bechard, Water Compliance Supervisor, MECP Sarnia District, [marc.bechard@ontario.ca](mailto:marc.bechard@ontario.ca)



**Ministry of the Environment, Conservation and Parks**

**TECUMSEH DISTRIBUTION SYSTEM**

**Inspection Report**

<b>Site Number:</b>	260004969
<b>Inspection Number:</b>	1-L5FD0
<b>Date of Inspection:</b>	Jan 16, 2020
<b>Inspected By:</b>	Neil Gilbert

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## Table of Contents

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Owner Information	2
Inspection Details	2
Inspection Summary	4
Introduction	4
Treatment Processes	4
Treatment Process Monitoring	5
Operations Manuals	5
Logbooks	6
Security	6
Certification and Training	6
Water Quality Monitoring	6
Water Quality Assessment	7
Reporting & Corrective Actions	7
Non-Compliance with Regulatory Requirements and Actions Required	8
Summary of Recommendations and Best Practice Issues	9
Signatures	10

Appendix A: Stakeholder Appendix

Appendix B: Inspection Rating Record

## OWNER INFORMATION:

<b>Company Name:</b>	TECUMSEH, THE CORPORATION OF THE TOWN OF		
<b>Street Number:</b>	917	<b>Unit Identifier:</b>	
<b>Street Name:</b>	LESPERANCE Rd		
<b>City:</b>	TECUMSEH		
<b>Province:</b>	ON	<b>Postal Code:</b>	N8N 1W9

## CONTACT INFORMATION

<b>Type:</b>	Main Contact	<b>Name:</b>	Brad Dupuis
<b>Phone:</b>	(519) 735-2184 x145	<b>Fax:</b>	(519) 735-1895
<b>Email:</b>	bdupuis@tecumseh.ca		
<b>Title:</b>	Water & Wastewater Manager		

## INSPECTION DETAILS:

<b>Site Name:</b>	TECUMSEH DISTRIBUTION SYSTEM
<b>Site Address:</b>	TECUMSEH
<b>County/District:</b>	TECUMSEH
<b>MECP District/Area Office:</b>	Windsor Area Office
<b>Health Unit:</b>	WINDSOR-ESSEX COUNTY HEALTH UNIT
<b>Conservation Authority:</b>	Essex Region Conservation Authority
<b>MNR Office:</b>	Chatham Regional Office
<b>Category:</b>	Large Municipal Residential
<b>Site Number:</b>	260004969
<b>Inspection Type:</b>	Special Announced
<b>Inspection Number:</b>	1-L5FD0
<b>Date of Inspection:</b>	Jan 16, 2020
<b>Date of Previous Inspection:</b>	Feb 28, 2019

## COMPONENTS DESCRIPTION

**Site (Name):** Distribution System

**Type:** **Sub Type:**

**Comments:**

The Tecumseh Distribution System is a standalone distribution system which supplies water to the area of the Town of Tecumseh in two discrete service zones. The zone north of Highway 401 is bounded by the Tecumseh municipal boundaries, south to Baseline Road. The zone south of Highway 401 is bounded by the Tecumseh municipal boundaries generally south of Essex County Road 46. Source water is from the City of Windsor water supply via the Windsor municipal distribution system. One currently unused connection from Windsor is through a short section of transmission main within the Lasalle municipal distribution system. The City of Windsor water supply draws its source water from the Detroit River in the vicinity of Belle Isle. According to the drinking water system profile, a population of approximately 24,000 residents is served by the Tecumseh Distribution System. It therefore falls into the "large municipal residential" category under O. Regulation 170/03.

Water mains take treated water from the City of Windsor to the service area through 10 of 12 currently used boundary metered connections points with Tecumseh. The water tower in the Town of Tecumseh maintains distribution system

pressure and is controlled by the Town. The water tower is monitored by the Windsor Utilities Commission (WUC) and the Town through SCADA. Secondary disinfection is provided by the A.H. Weeks water treatment plant in Windsor.

The Tecumseh Distribution System 2018 annual report, prepared by the Town of Tecumseh, states that:

- Town of Tecumseh, City of Windsor and Windsor Utilities Commission (WUC) entered into a 50-year service agreement in November 2004 (By-law 2004-71). The service agreement was implemented on March 31, 2006.
- Prior to August 1, 2008, WUC provided water to 2400 residents in the former Township of Sandwich South, south of Highway 401 ("South Water Area"). The Town of Tecumseh assumed the responsibility for the operations and maintenance of the water distribution system from WUC in this South Water Area effective August 1, 2008.

## INSPECTION SUMMARY:

### Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on an inspection of a "stand alone connected distribution system". This type of system receives treated water from a separately owned "donor" system. This report contains the elements required to assess key compliance and conformance issues associated with a "receiver" system. This report does not contain items associated with the inspection of the donor system, such as source waters, intakes/wells and treatment facilities.

This report is based on a "focused" inspection of the system and was conducted remotely. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O. Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

**This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.**

The Tecumseh Distribution System (DWS#260004969) is owned by the Corporation of the Town of Tecumseh. It is a standalone distribution system that receives treated surface water from the City of Windsor water supply via the Windsor municipal distribution system. The City of Windsor water supply draws its source water from the Detroit River in the vicinity of Belle Isle.

According to Tecumseh's drinking water system profile, a population of approximately 24,000 residents is served by the Tecumseh Distribution System. It therefore falls into the "large municipal residential" category under O. Reg. 170/03.

The water tower in the Town of Tecumseh maintains distribution system pressure and secondary disinfection is provided by the A.H. Weeks water treatment plant in Windsor.

This inspection was conducted remotely and the inspection review period was March 1, 2019 to December 31, 2019.

### Treatment Processes

- **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**  
Schedule A of the Drinking Water Works Permit (#040-201, Issue Number 4 dated May 24, 2019) contains the following physical components:
  - 4,540m<sup>3</sup> water tower fed from the distribution system, and
  - watermains within the Town of Tecumseh Distribution System.
- **The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as**

### Treatment Processes

**required by their Drinking Water Works Permit during the inspection period.**

During the inspection review period, "Form 1 - Record of Watermains Authorized as a Future Alteration" form was prepared for the following:

1) 300mm diameter watermain at North Talbot Road and County Road 11 (dated September 17, 2019).

- **The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.**

During the inspection review period, "Form 2 - Record of Minor Modifications or Replacements to the Drinking Water System" forms was prepared for the following project:

1) 150mm watermain lowered on South Talbot Road during two bridge replacements (dated April 4, 2019).

- **Where an activity has occurred that could introduce contamination, all parts of the drinking water system were disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.**

### Treatment Process Monitoring

- **The secondary disinfectant residual was measured as required for the distribution system.**

As per O.Reg. 170/03 s 7-2 (3), the owner/operating authority of a system that provides secondary disinfection shall ensure that at least seven distribution samples are taken each week and are tested immediately for, (a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or (b) combined chlorine residual, if the system provides chloramination. The following rules apply to the distribution samples referred above unless at least one sample is taken on each day of the week: At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week. Then, at least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the first day of the sampling week. When more than one sample is taken on the same day of the week then each sample must be taken from a different location.

During the inspection review period (March 1, 2019 to December 31, 2019) at least seven distribution samples were collected each week using the 4/3 rule and tested for free chlorine residuals.

### Operations Manuals

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**
- **The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

Condition 16.2 under Schedule B of Tecumseh's Drinking Water Licence (#040-101, Issue #4 dated May 24, 2019) notes that the operations and maintenance manuals shall include (at a minimum) the following:

16.2.1 The requirements of this licence and associated procedures;

16.2.2 The requirements of the drinking water works permit for the drinking water system;

16.2.3 A description of the processes used to achieve secondary disinfection within the drinking water system;

16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;

16.2.5 Procedures for the operation and maintenance of monitoring equipment;

16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;

16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint.

A review of Tecumseh's operating manual and standard operating procedures suggests that these conditions



### Operations Manuals

appear to be satisfied. All secondary disinfection is provided by the City of Windsor's A.H. Weeks Water Treatment Plant and Tecumseh does not maintain or operate a re-chlorination system.

### Logbooks

- Logbooks were properly maintained and contained the required information.
- Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.

### Security

- The owner had provided security measures to protect components of the drinking water system.

### Certification and Training

- The overall responsible operator had been designated for each subsystem.
- Operators-in-charge had been designated for all subsystems which comprised the drinking water system.
- All operators possessed the required certification.

### Water Quality Monitoring

- All microbiological water quality monitoring requirements for distribution samples were being met.

As per O.Reg. 170/03 s10-2, the owner/operating authority for the system shall ensure that if a system serves 100,000 people or less, at least eight distribution samples, plus one additional sample for every 1,000 people served, are taken every month, with at least one sample being taken each week. Each of the distribution samples collected must be tested for E. coli and total coliforms and at least 25 percent of these samples must be tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). During the inspection review period (March 1, 2019 to December 31, 2019) all microbiological water monitoring requirements for distribution water samples were performed.

- All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.

As per O.Reg. 170/03 s13-6.1, the owner/operating authority of a system that provides chlorination or chloramination shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the distribution system that is likely to have an elevated potential for the formation of haloacetic acids (HAAs), and have the sample tested for HAAs.

On January 1, 2020, the O.Reg. 169/03 standard for HAA (80ug/L) came into effect and is expressed as a RAA, where RAA is defined as "the running annual average of quarterly results" for HAA for a drinking water system. During the inspection review period (March 1, 2019 to December 31, 2019), these HAA quarterly samples were collected on April 8, 2019 (HAA result=5.5ug/L), July 8, 2019 (HAA result=7.6ug/L) and October 7, 2019 (HAA result=19.3ug/L).

The RAA (running annual average of quarterly results) of the HAA samples collected during the inspection review period plus the first quarter of 2019 (HAA result was 5.3ug/L) is 9.4ug/L which would be below the new Ontario Drinking Water Quality Standard (ODWQS) of 80 ug/L (expressed as a running annual average of quarterly results).

### Water Quality Monitoring

- **All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.**

As per O.Reg. 170/03 s13-6, the owner/operating authority of a system that provides chlorination or chloramination shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the distribution system that is likely to have an elevated potential for the formation of trihalomethanes (THMs), and have the sample tested for THMs.

During the inspection review period (March 1, 2019 to December 31, 2019), these THM quarterly samples were collected on April 8, 2019 (at 4 locations with a THM average =11.8ug/L), July 8, 2019 (at 3 locations with a THM average=19.7ug/L) and October 7, 2019 (at 3 locations with a THM average=40.7ug/L).

The RAA (running annual average of quarterly results) of the THM samples collected during the inspection review period plus the first quarter of 2019 (THM average result was 20.2ug/L) is 23.1ug/L which is below the Ontario Drinking Water Quality Standard (ODWQS) of 100 ug/L for THM's (expressed as a running annual average of quarterly results).

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

### Water Quality Assessment

- **Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).**

### Reporting & Corrective Actions

- **All changes to the system registration information were provided within ten (10) days of the change.**

**NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED**

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

**Not Applicable**

## **SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES**

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

**Not Applicable**

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**SIGNATURES**

Inspected By:

Neil Gilbert

Signature: (Provincial Officer)



Reviewed &amp; Approved By:

Marc Bechard

Signature: (Supervisor)

Review &amp; Approval Date:

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.



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**Stakeholder Appendix**

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# Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or [waterforms@ontario.ca](mailto:waterforms@ontario.ca).

For more information on Ontario's drinking water visit [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)



PUBLICATION TITLE	PUBLICATION NUMBER
<b>FORMS:</b> Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking Water in Ontario	Website
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	Website
Filtration Processes Technical Bulletin	Website
Ultraviolet Disinfection Technical Bulletin	Website
Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments	Website
Certification Guide for Operators and Water Quality Analysts	Website
Guide to Drinking Water Operator Training Requirements	9802E
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	Website
Drinking Water System Contact List	7128E01
Ontario's Drinking Water Quality Management Standard - Pocket Guide	Website
Watermain Disinfection Procedure	Website
List of Licensed Laboratories	Website

# Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à [waterforms@ontario.ca](mailto:waterforms@ontario.ca) si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site [www.ontario.ca/eaupotable](http://www.ontario.ca/eaupotable)

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Renseignements sur le profil du réseau d'eau potable	012-2149F
Avis de demande de services de laboratoire	012-2148F
Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-4444F
Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux	Site Web
Marche à suivre pour désinfecter l'eau potable en Ontario	Site Web
Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection	Site Web
Filtration Processes Technical Bulletin (en anglais seulement)	Site Web
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	Site Web
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable	Site Web
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	Site Web
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802F
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	Site Web
Liste des personnes-ressources du réseau d'eau potable	Site Web
L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche	Site Web
Procédure de désinfection des conduites principales	Site Web
Laboratoires autorisés	Site Web





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**Inspection Rating Record**

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Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2019-2020)

**DWS Name:** TECUMSEH DISTRIBUTION SYSTEM  
**DWS Number:** 260004969  
**DWS Owner:** Tecumseh, The Corporation Of The Town Of  
**Municipal Location:** Tecumseh

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Adhoc  
**Inspection Date:** January 16, 2020  
**Ministry Office:** Windsor Area Office

**Maximum Question Rating:** 193

Inspection Module	Non-Compliance Rating
Treatment Processes	0 / 43
Operations Manuals	0 / 28
Logbooks	0 / 18
Certification and Training	0 / 28
Water Quality Monitoring	0 / 51
Reporting & Corrective Actions	0 / 4
Treatment Process Monitoring	0 / 21
<b>TOTAL</b>	<b>0 / 193</b>

**Inspection Risk Rating** 0.00%

**FINAL INSPECTION RATING:** 100.00%

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2019-2020)

**DWS Name:** TECUMSEH DISTRIBUTION SYSTEM  
**DWS Number:** 260004969  
**DWS Owner:** Tecumseh, The Corporation Of The Town Of  
**Municipal Location:** Tecumseh

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Adhoc  
**Inspection Date:** January 16, 2020  
**Ministry Office:** Windsor Area Office

**Maximum Question Rating:** 193

<b>Inspection Risk Rating</b>	<b>0.00%</b>
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<b>FINAL INSPECTION RATING:</b>	<b>100.00%</b>
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