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Excess Soil Destination Assessment Report
Infrastructure Upgrades Project
Eganville, Ontario

GEMTEC Project: 101260.004

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Submitted to:

Township of Bonnechere Valley
P.O. Box 100, 49 Bonnechere Street
Eganville, Ontario
K0J 1T0

Excess Soil Destination Assessment Report
Infrastructure Upgrades Project
Eganville, Ontario

June 24, 2026
GEMTEC Project: 101260.004

GEMTEC Consulting Engineers and Scientists Limited
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June 24, 2026 File: 101260.004

Township of Bonnechere Valley
P.O. Box 100, 49 Bonnechere Street
Eganville, Ontario
K0J 1T0

Attention: Annette Gilchrist, CMO, AOMC, CAO/Clerk/Deputy Treasurer

Re: Excess Soil Destination Assessment Report
Infrastructure Upgrades Project
Eganville, Ontario

Enclosed is the Excess Soil Destination Assessment Report (ESDAR) for the above-noted project in Eganville, Ontario (herein referred to as the 'Project Area'). The ESDAR was completed in general accordance with Ontario Regulation 406/19 to document where excess soil generated within the Project Area will be sent.

We trust this information is sufficient for your current needs. If you have any questions or require further information, please contact the undersigned.

Jeffrey Gauthier, B.Eng
Environmental Technologist

Daniel Elliot, P.Geo., QP_{ESA}
Senior Environmental Geoscientist

Mike Kosiw, EP, $CESA_{II}$
Contaminated Sites Lead

JG/DE/MK

Enclosures
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1.0 INTRODUCTION

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by the Township of Bonnechere Valley to prepare an Excess Soil Destination Assessment Report (ESDAR) for excess soil generated from the proposed construction works related to the Infrastructure Upgrades Project, located in Eganville, Ontario (herein referred to as the 'Project Area').

1.1 Source Site Description

A summary of the project limits is provided below.

- John Street from Highway 41, going east (approximately 530 metres (m))
- Easement from John Street to Highway 41 (approximately 100 m)
- Highway 41 from Louise Street to Queen Street (approximately 140 m)
- Queen Street from Highway 41 to Melanie Street (approximately 235 m)

The center of the Project Area, based on MTM NAD83 Zone 18T, is 336205.057 metres (m) E and 5044734.857 m N.

1.2 Regulatory Framework

The management of excavated and excess soil in Ontario is legislated by the Ministry of Environment, Conservation and Parks (MECP) through Ontario Regulation (O.Reg.) 406/19 On-Site and Excess Soil Management and accompanying *'Rules for Soil Management and Excess Soil Quality Standards*', dated 2025 (Soil Rules). As required by O.Reg. 406/19, this ESDAR documents information regarding the proposed reuse site along with the quality and quantity of the excess soil intended for reuse.

1.3 Project Summary

The purpose of this assignment is to complete the ESDAR, as outlined in O.Reg 406/19, in support of the project and to enable the Project Leader to proceed with registration.

GEMTEC understands that the volume of excess soil to be managed as part of the project is approximately 5,600 cubic metres (m^3).

1.4 On-Site Processing

No processing of excess soil is planned prior to removal from the Project Area. No processing is expected at the receiving sites.

1.5 Project Schedule

This project is anticipated to generate excess soil between August 2026 and December 2027.

1.6 Reference Documents

The following reports were reviewed and are referenced through the development of this ESDAR:

- "*Soil Characterization Report – Infrastructure Upgrades Project, Eganville, Ontario*" completed by GEMTEC. Project 101260.004 dated June 10, 2026.

2.0 SOIL QUALITY RESULTS

All soil quality results summarized herein are based on the analytical results presented in the Soil Characterization Report (GEMTEC., June 2026).

2.1 Bulk Soil Results

A total of 27 bulk soil and three duplicate samples were collected and analysed for one or more of the following Contaminants of Potential Environmental Concern (COPCs): Metals, hydride forming metals, other regulated parameters ((ORP) including: electrical conductivity (EC), sodium absorption ratio (SAR), pH, hot water soluble boron (B-HWS), hexavalent chromium (CrVI), mercury (Hg), and cyanide (CN-)), petroleum hydrocarbons fractions F1 to F4 (PHC F1-F4), benzene, toluene, ethylbenzene, and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and polychlorinated biphenyls (PCBs). The following table summarizes the findings:

Table 1 – Soil Quality Results Summary

Sample ID	Depth	Table 1 Ag/Ot ESQS	Table 2.1 RPI ESQS	Table 2.1 ICC ESQS	Table 3.1 RPI ESQS	Table 3.1 ICC ESQS
BH26-01 SA1	0.33 - 0.61	SAR	None	None	None	None
BH26-01 SA2	0.61 - 1.52	Lead, Mercury, Molybdenum, VOCs, PHCs (F1, F2, F3, F4, F4G), EC, SAR	Mercury, PHCs (F1, F2, F3)	Mercury, PHCs (F1, F2, F3)	Mercury, PHCs (F1, F2, F3)	PHCs (F1, F2, F3)
BH26-02 SA1A	0.10 - 0.41	PHC (F3, F4, F4G), EC, SAR	PHC F3, EC, SAR	PHC F3, EC, SAR	PHC F3, EC, SAR	PHC F3, EC, SAR
BH26-02 SA2A	0.76 - 1.12	SAR	SAR	None	None	None
BH26-03 SA1A	0.18 - 0.38	Benzo(a)pyrene, 2- and 1-methyl Naphthalene, PHCs (F4, F4G) EC, SAR	None	None	None	None

Sample ID	Depth	Table 1 Ag/Ot ESQS	Table 2.1 RPI ESQS	Table 2.1 ICC ESQS	Table 3.1 RPI ESQS	Table 3.1 ICC ESQS
BH26-03 SA1B	0.38 - 0.64	Antimony, Lead, VOCs, PHC F2, EC, SAR	Lead, PHC F2	Lead	Lead	None
BH26-03 SA2	0.76 - 1.37	Lead, Mercury, EC, SAR	Mercury, EC, SAR	Mercury, EC	Mercury, EC	EC
BH26-04 SA1	0.15 - 0.61	PHCs (F4, F4G), SAR	None	None	None	None
BH26-04 SA2	0.76 - 1.37	SAR	None	None	None	None
BH26-04 SA3	1.52 - 2.13	Tetrachloroethylene, SAR	None	None	None	None
BH26-05 SA1	0.10 - 0.56	PHCs (F4, F4G), EC, SAR	EC, SAR	None	None	None
BH26-05 SA2B	0.91 - 1.37	Barium, Selenium, EC, SAR	EC, SAR	None	None	None
BH26-06 SA1	0.15 - 0.61	PHCs (F3, F4, F4G), EC, SAR	PHC F3, EC, SAR	PHC F3	PHC F3	PHC F3
BH26-06 SA101	0.15 - 0.61	PHCs (F2, F3, F4, F4G), EC, SAR	PHCs (F2, F3 F4G), EC, SAR	PHCs (F2, F3)	PHCs (F2, F3)	PHCs (F2, F3)
BH26-06 SA2	0.76 - 1.37	EC, SAR	None	None	None	None
BH26-07 SA2	0.76 - 1.37	Antimony, Lead, PAHs	None	None	None	None
BH26-07 SA4	2.29 - 2.90	SAR	None	None	None	None
BH26-08 SA1	0.13 - 0.61	PHCs (F4, F4G), EC, SAR	EC, SAR	EC, SAR	EC, SAR	EC, SAR
BH26-08 SA3	1.52 - 2.13	EC, SAR	EC, SAR	None	None	None
BH26-08 SA5	3.00 - 3.61	SAR	None	None	None	None
BH26-09 SA2	0.76 - 1.37	PHCs (F4, F4G), EC, SAR	None	None	None	None

Sample ID	Depth	Table 1 Ag/Ot ESQS	Table 2.1 RPI ESQS	Table 2.1 ICC ESQS	Table 3.1 RPI ESQS	Table 3.1 ICC ESQS
BH26-09 SA102	0.76 - 1.37	EC, SAR	EC, SAR	None	None	None
BH26-09 SA4	2.29 - 2.90	SAR	None	None	None	None
BH26-10 SA1	0.10 - 0.61	PHCs (F4, F4G), SAR	None	None	None	None
BH26-10 SA3	1.52 - 2.13	SAR	None	None	None	None
BH26-10 SA5	3.00 - 3.61	SAR	None	None	None	None
BH26-11 SA2	0.76 - 1.37	PHCs (F4, F4G), SAR	None	None	None	None
BH26-11 SA102	0.76 - 1.37	PHCs (F4, F4G), SAR	None	None	None	None
BH26-11 SA4	2.29 - 2.54	PHCs (F4, F4G)	None	None	None	None
BH26-11 SA5	3.00 - 3.51	None	None	None	None	None

Notes:

PAHs – Polycyclic Aromatic Hydrocarbons
BTEX – Benzene, Toluene, Ethylbenzene, Xylenes
VOCs – Volatile Organic Compounds
PHC F1-F4 – Petroleum Hydrocarbons Four Fractions
EC – Electrical Conductivity
SAR – Sodium Adsorption Ratio
1. MECP Table 1 Ag/Ot SCS: Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, March 2004, amended July 1, 2011. Full Depth Background Site Condition Standards for Agri/Ot.
2. MECP Table 2.1 RPI ESQS: MECP, Soil Rules, October 2025. Full Depth ESQS in a Potable Ground Water Condition for RPI Property Use.
3. MECP Table 2.1 ICC ESQS: MECP, Soil Rules, October 2025. Full Depth ESQS in a Potable Ground Water Condition for ICC Property Use.
4. MECP Table 3.1 ICC ESQS: MECP, Soil Rules, October 2025. Full Depth ESQS in a Non-Potable Ground Water Condition for ICC Property Use.
5. MECP Table 4.1 ICC ESQS: MECP, Soil Rules, October 2025. Stratified Conditions ESQS in a Potable Ground Water Condition for ICC Property Use - Subsurface

2.2 Leachate Analytical Results and Waste Classification Testing

A total of seven samples were submitted for mSPLP and Toxicity Characteristic Leaching Procedure (TCLP) waste classification analysis. The following table summarizes the findings:

Table 2 – Leachate Quality Results Summary

TCLP Sample ID	O.Reg. 347/558 Exceedances				
TCLP	None				
mSPLP Sample ID	MECP Table 1 Ag/Ot LSL	MECP Table 2.1 RPI LSL	MECP Table 2.1 ICC LSL	MECP Table 3.1 ICC LSL	MECP Table 4.1 ICC LSL
BH26-01 SA2	None	None	None	None	Lead
BH26-03 SA1B	None	None	None	None	Lead
BH26-03 SA2	Tetrachloroethylene	Tetrachloroethylene	None	None	Lead
BH26-04 SA3	Tetrachloroethylene	Tetrachloroethylene	None	None	None
BH26-07 SA2	None	None	None	None	Lead
BH26-07 SA4	None	None	None	None	Lead

Notes:

O.Reg 347/558 Schedule 4: O.Reg 347 and O.Reg 588/00: General – Waste Management. Schedule 4: Leachate Quality Criteria (MECP, 2011)
MECP Table 1 Ag/Ot LSL: Ontario Ministry of the Environment, Conservation and Parks (MECP), "Rules for Soil Management and Excess Soil Quality Standards" (Soil Rules), October 2025. Leachate Screening Levels (LSL) for Full Depth Background Site Condition Standards for Agri/Ot Property Use.
MECP Table 2.1 RPI LSL: MECP, Soil Rules, October 2025. LSL for Full Depth Excess Soil in a Potable Ground Water Condition for RPI Property Use.
MECP Table 2.1 ICC LSL: MECP, Soil Rules, October 2025. LSL for Full Depth Excess Soil in a Potable Ground Water Condition for ICC Property Use.
MECP Table 3.1 ICC LSL: MECP, Soil Rules, October 2025. LSL for Full Depth Excess Soil in a Non-Potable Ground Water Condition for ICC Property Use.
MECP Table 4.1 ICC LSL: MECP, Soil Rules, October 2025. LSL for Stratified Excess Soil in a Potable Ground Water Condition for ICC Property Use - Subsurface.

3.0 EXCESS SOIL DESTINATIONS

Based on the information provided by the client and soil characterization results, the following soil destinations and management options have been identified:

- Soil that meets Table 1 SCS and/or Table 2.1 RPI ESQS and LSL with exception of salt parameters is suitable for reuse at 2213 Ruby Road, Killaloe, Ontario.
- Soil that exceeds Table 3.1 ICC ESQS and/or Table 2.1 RPI LSL and is classified as non-hazardous waste is suitable for disposal at 213 Snodrifters Road, North Algona Wilberforce, Ontario.

- No other reuse sites have been identified for the project at this time. If additional reuse sites are identified at a later date, confirmation of suitability for the intended new reuse site should be completed by a QP by reviewing the available soil quality results against any pertinent ESQS or site-specific instruments that may be in place at the new reuse site.
- Salt-impacted soil must be finally placed in accordance with the following requirements:
    - It must be placed at least 1.5 metres below the ground surface.
    - It must not be finally placed:
        - within 30 metres of a waterbody, and
        - within 100 metres of a potable water well or any area with an intended property use that may require a potable water well.
    - The Project Leader or operator must inform the reuse site owner/operator that the soil may contain the identified chemical of concern, provide sampling results, and communicate any potential risks to surface water or groundwater.

3.1 Reuse Site Details

The client has identified the reuse/disposal sites and respective volumes for the excess soil to be transported which are outlined in the tables below:

Table 3 – Summary of Excess Soil Receiver Site (2213 Ruby Road)

Site Information	Beneficial Reuse Site
Owner and Site Name	Township of Bonnechere Valley, Ruby Road Waste Transfer Site
Municipal Address	2213 Ruby Road, Killaloe, Ontario
Reuse Site Contact	Jason Zohr (+1 343-369-0925)
Instrument Type	None
Reuse Site QP	N/A
Quantity of Soil Being Sent	5,000 m^3
Quality of Soil Being Sent	Soil meeting Table 1 and 2.1 RPI ESQS with the exception of salt impacts.
Beneficial Purpose	Beneficial purpose is for lot grading.
Geographic Coordinates	45.5361, -77.3367
Fill Management Plan	No

Table 4 – Summary of Landfill Site (213 Snodrifters Road)

Site Information	Landfill Site
Owner and Site Name	Township of Bonnechere Valley, Eganville Waste Disposal Site
Municipal Address	213 Snodrifters Road, North Algona Wilberforce, Ontario
Reuse Site Contact	Jason Zohr (+1 343-369-0925)
Instrument Type	Waste ECA, A413703
Reuse Site QP	N/A
Quantity of Soil Being Sent	600 m^3
Quality of Soil Being Sent	Exceeding Table 3.1 ICC, non-hazardous waste.
Beneficial Purpose	Daily cover and/or final cover
Geographic Coordinates	45.5594, -77.0816
Fill Management Plan	No

4.0 SOIL TRACKING

A hauling record shall be used for each load of excess soil transported off-site. The hauling record shall be available at all times during the transport and shall include:

- The location at which the excess soil was loaded for transportation;
- The date and time the excess soil was loaded for transportation;
- The quantity/quality of excess soil in the load;
- The name of an individual who may be contacted to respond to inquiries regarding the load, including inquiries regarding the soil quality;
- The name of the corporation, partnership or firm transporting the excess soil, the name of the driver of the vehicle and the number plates issued for the vehicle under the Highway Traffic Act; and,
- The location at which the excess soil is to be deposited.

Upon arriving at the receiving site, the person who is transporting the excess soil shall ensure that the hauling record is updated by a representative of the receiving site to include:

- The date and time the load of excess soil is deposited;

- The name and phone number of the individual at the receiving site who acknowledges the date and time the soil was deposited; and
- An acknowledgement that the soil was deposited.

A copy of the hauling record is to be provided to the receiving site representative, and project leader.

5.0 CONTINGENCY

In the event that the soil cannot be deposited at the identified disposal or receiving site, the operator of the vehicle transporting the excess soil must return to the Project Area and deposit the excess soil or await further instructions from the Project Leader.

6.0 LIMITATIONS

This report was prepared for, and the work referred to within it, has been undertaken by GEMTEC Consulting Engineers and Scientists Limited for the Township of Bonnechere Valley. It is intended for the exclusive use of the Township of Bonnechere Valley. This report may not be relied upon by any other person or entity without the express written consent of GEMTEC and the Township of Bonnechere Valley. Nothing in this report is intended to provide a legal opinion.

The investigation undertaken by GEMTEC with respect to this report and any conclusions or recommendations made in this report reflect the best judgements of GEMTEC based on the site conditions observed during the investigations undertaken at the date(s) identified in the report and on the information available at the time the report was prepared. This report has been prepared for the application noted and it is based, in part, on visual observations made at the site, subsurface investigations at discrete locations and depths and laboratory analyses of specific chemical parameters and material during a specific time interval, all as described in the report. Unless otherwise stated, the findings contained in this report cannot be extrapolated or extended to previous or future site conditions, portions of the site that were unavailable for direct investigation, subsurface locations on the site that were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Chemical parameters other than those addressed by the investigation described in this report may exist in soil and groundwater elsewhere on the site, the chemical parameters addressed in the report may exist in soil and groundwater at other locations at the site that were not investigated, and concentrations of the chemical parameters addressed which are different than those reported may exist at other locations on the site than those from where the samples were taken

7.0 REFERENCES

Soil Characterization Report – Infrastructure Upgrades Project, Eganville, Ontario completed by GEMTEC. Project 101260.004 dated June 10, 2026.

Ontario Ministry of the Environment, Conservation and Parks (MECP). Ontario Regulation 153/04, Soil, groundwater, and sediment standards for use under Part XV.1 of the Environmental Protection Act. June 1, 2024, most recently updated October 2025.

Ontario Ministry of the Environment, Conservation and Parks (MECP). Ontario Regulation 406/19, – On-site and Excess Soil Management. December 4, 2019, most recently updated October 2025.

Ontario Ministry of the Environment, Conservation and Parks (MECP). Rules for Soil Management and Excess Soil Quality Standards. December 2019, most recently revised October 2025.

8.0 QUALIFIED PERSON DECLARATION

The Qualified Person (QP) responsible for this report makes the following declarations, as per O.Reg. 406/19:

- The Project Leader or operator of the Project Area have provided the QP or an individual supervised by the QP with the necessary information and access to the Project Area and authorized the QP or an individual supervised by the QP to make any inquiries of the Project Leader and operator's employees and agents, for the purpose of assisting the QP in preparing and/or overseeing the preparation of this document.
- The QP confirms that he/she was responsible for the preparation, oversight, and/or review of this document.
- The QP confirms that the document is complete and accurate and meets the requirements of the regulation and the Soil Rules to the best of the QP's knowledge, subject to the limitations set out within our proposal and this report.

9.0 CLOSURE

We trust this report provides sufficient information for your present purposes. If you have any questions concerning this report, please do not hesitate to contact the undersigned.

Jeffrey Gauthier, B.Eng
Environmental Technologist

Daniel Elliot, P.Geo., QP_{ESA}
Senior Environmental Geoscientist

Mike Kosiw, EP, $CESA_{II}$
Contaminated Sites Lead

Report to: Township of Bonnechere Valley
GEMTEC Project: 101260.004 (June 24, 2026)

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