

December 13, 2023

Project No. CA-WSP-111-53036-11

Pamela Antonio, Supervisor of Waste Management

Oxford County 21 Reeve Street PO Box 1614 Woodstock, ON N4S 7Y3

2023 STORMWATER RESULTS – SUMMARY AND INTERPRETATION ENVIRONMENTAL COMPLIANCE APPROVAL (ECA) NO. 3080-CR4GRE OXFORD COUNTY COMPOST FACILITY, OXFORD COUNTY

We are pleased to provide the summary and interpretation of stormwater quality monitoring undertaken in November 2023 at the Oxford County Compost Facility (Site). This summary was prepared to comply with the requirements of Condition 8(3)a and part of 8(3)b of the Ministry of the Environment, Conservation and Parks (MECP) Amended Environmental Compliance Approval (ECA) No. 3080-CR4GRE, issued May 8, 2023. A copy of ECA No. 3080-CR4GRE is provided in **Appendix A**.

The required monitoring program for the Site is outlined in Condition 5 of ECA No. 3080-CR4GRE. The 2023 monitoring program was completed by the County and the monitoring program results were provided to WSP Canada Inc. (WSP) for use in preparation of this summary report.

1.0 BACKGROUND

Oxford County's Compost Facility (OCCF) is located on Part Lot 10, Concession 2 in the Township of Southwest Oxford. The municipal address is 384108 Salford Road, Salford, Ontario. The property is owned and operated by Oxford County (County) and hosts the composting management and biosolids centralized storage facilities. This property is located east of the Oxford County Waste Management Facility (OCWMF) which is home to the County's non-hazardous solid waste landfill site and waste diversion facility.

The stormwater management facility at the OCCF was originally constructed in 2008 in accordance with MECP ECA No. 8633-76AHSG. In May 2016, ECA No. 8633-76AHSG was revoked and replaced by ECA No. 4022-A8YQ6R, which was issued to approve modifications to the facility. As a result of increased usage by the public, the County applied for an ECA amendment in 2022 to approve an increase in the capacity of the OCCF, including an expansion of the stormwater management facility. Amended ECA No. 3080-CR4GRE was subsequently issued on May 8, 2023 to permit the expansion works of the stormwater management facility. A copy of ECA No. 3080-CR4GRE is provided in **Appendix A**.

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As of August 10, 2023, the expanded stormwater management works at the Site have been used in the collection, transmission, treatment and disposal of stormwater runoff from a total catchment area of 5.97 hectares. The facility is designed to provide enhanced level water quality protection and erosion control, and to attenuate post-development peak flows to pre-development peak flows for all storm events up to and including the 50-year storm event, discharging to the Hooper Drain.

The stormwater management (SWM) facility at the Site consists of a clay-lined wet pond and sediment forebay with a permanent storage volume of $3,255 \text{ m}^3$ and an extended detention volume of 450.6 m^3 . The total storage volume (including the permanent pool) is $7,975 \text{ m}^3$, at a total depth of 1.9 m. During a 100-year storm event, the pond is designed to discharge water to the Hooper Drain via an outlet structure at the west end of the pond, allowing a maximum discharge of 0.009 m^3 per second.

2.0 MONITORING PROGRAM

In accordance with Condition 5 of ECA No. 3080-CR4GRE, semi-annual (spring and fall) samples of the surface water effluent from the SWM pond are required to be collected from the designated sampling location after a significant rainfall event causing a stormwater discharge from the SWM pond. According to ECA No. 3080-CR4GRE, samples are required to be analyzed for the parameters listed below.

Field Parameters - pH, temperature, conductivity and dissolved oxygen

Laboratory Parameters – alkalinity, total ammonia nitrogen, chloride, iron, nitrate nitrogen, nitrite nitrogen, total kjeldahl nitrogen (TKN), pH, total phosphorus, total suspended solids (TSS), sulphate, biological oxygen demand (CBOD₅), chemical oxygen demand (COD) and phenol

In 2023, samples were collected by County staff using the methods and protocols listed in Condition 5(2) of ECA No. 3080-CR4GRE. As the ECA was issued on May 8, 2023 and construction of expansion to the SWM facility was completed on August 10, 2023, the initial compliance sample was collected on November 8, 2023. The sample was collected while the SWM pond was discharging, following a significant rainfall event. Field measurements of pH, conductivity, temperature and dissolved oxygen were collected during sampling and the sample was submitted to SGS Canada Inc. in Lakefield, Ontario for analysis.

3.0 WATER QUALITY RESULTS

The November 2023 sample results are presented in Table B-1 (**Appendix B**), while available historic water quality results (2008-2023) are presented in Table B-2 (**Appendix B**). The November 2023 laboratory certificate of analysis is provided in **Appendix C**.

ECA No. 3080-CR4GRE does not specify Effluent Limits for the SWM pond, but does state that a comparison to the Provincial Water Quality Objectives (PWQO) and a summary of any exceedances are required, as per Condition 8(3)b of the ECA. As such, the sample results have been assessed in this report using the PWQO (MECP 1994 and updates), which are the applicable objectives for surface water quality within Ontario. For parameters where a PWQO does not exist, the Canadian Environmental Quality Guidelines (CEQG) (Canadian Council of Ministers of the Environment, 1999) were also used for assessment.

As shown in Table B-2, the November 2023 water quality results were generally consistent with historical results, with the exception of the TSS concentration, which was lower than the historical range for this parameter.

The following sections provide discussion on individual parameter results.

Field Parameters

Field pH, temperature, conductivity and dissolved oxygen were reported to be within their respective historic ranges in November 2023. The field pH value was within the PWQO range of 6.5 to 8.5 pH units, and the field dissolved oxygen value complied with the temperature dependent PWQO range (greater than 4 to 7 mg/L).

Laboratory Parameters

The November 2023 alkalinity concentration was within its historic range. As background surface water samples are not collected at the Site, it is not possible to compute a PWQO for this parameter with a subsequent comparison.

Ammonia was reported below the CEQG concentration (pH and temperature dependent) during the November 2023 sampling event. The concentration of chloride was also less than the CEQG (120 mg/L) during the November 2023 sampling event.

The concentration of iron in November 2023 (0.537 mg/L) exceeded the PWQO (0.300 mg/L). As shown in Table B-2, elevated iron concentrations are consistently observed in the SWM pond samples, and no discernable concentration trends are observed based on the historical data at this sampling location. The November 2023 sample contained an iron concentration that was on the low end of the historic range (0.510 to 16.0 mg/L).

The nitrate concentration was below the CEQG (13 mg/L), while the nitrite concentration (0.08 mg/L) was slightly above the CEQG (0.060 mg/L) during the November 2023 sampling event. As shown in Table B-2, slightly elevated nitrite concentrations are observed in the SWM pond samples, on occasion. No discernable nitrite concentration trends are observed based on the historical data at this sampling location, and the nitrite concentration was within its historic range (<0.03 to 0.11 mg/L).

The laboratory pH in November 2023 was within the PWQO range of 6.5 to 8.5 pH units.

The concentration of total phosphorus in November 2023 (0.181 mg/L) exceeded the PWQO (0.03 mg/L). As shown in Table B-2, elevated phosphorus concentrations are consistently observed in the SWM pond samples, and no discernable concentration trends are observed based on the historical data at this sampling location. The November 2023 sample contained a phosphorus concentration that was on the low end of the historic range (0.047 to 1.26 mg/L).

TSS was reported below the CEQG concentration (25 mg/L) during the November 2023 sampling event, and was also lower than its historic range.

Phenols was not detected in the November 2023 sample, and as such, did not exceed the PWQO. It is noted that the detection limit for this sample was 0.002 mg/L, which is higher than its PWQO (0.001 mg/L). It is recommended that a detection limit of at least 0.001 mg/L be specified to the laboratory and used for future sampling events, to ensure that the results can be properly compared to the PWQO for this parameter.

TKN, sulphate, CBOD₅ and COD concentrations were within their respective historic ranges in November 2023. PWQOs or CEQGs do not exist for these parameters.

Summary

Overall, occasional minor PWQO/CEQG exceedances for iron, nitrite and total phosphorus were reported in November 2023. The chemical results from November 2023 were generally consistent with historic results, with

no discernable increasing or decreasing trends. Based on the 2023 chemical results, the OCCF SWM facility monitoring program was completed in accordance with ECA No. 3080-CR4GRE.

4.0 CLOSURE

We trust that this submission meets your current needs. If you have any questions or require further information, please feel free to contact us.

Yours sincerely,

WSP Canada Inc.

Rebecca Wanaek

Rebecca Warrack, P.Eng. Project Engineer Earth & Environment

Alber Sunt

Albert Siertsema, P.Eng., PMP Project Engineer Earth & Environment

Attachments: Appendix A: ECA No. 3080-CR4GRE Appendix B: 2023 and Historical Analytical Results Appendix C: 2023 Laboratory Certificates of Analysis

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5.0 **REFERENCES**

Canadian Council of Ministers of the Environment, 1999; Canadian Environmental Quality Guidelines (CEQG)

Ministry of the Environment and Energy, 1994; *Water Management: Policies Guidelines and Provincial Water Quality Objectives*.

APPENDIX A

ECA No. 3080-CR4GRE



Ministry of the Environment, Conservation and Parks Ministère de l'Environnement, de la Protection de la nature et des Parcs

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 3080-CR4GRE Issue Date: May 8, 2023

County of Oxford 21 Reeve St P.O. Box 1614 Woodstock, Ontario N4S 7Y3

Site Location: Oxford County Compost Facility 384108 Salford Rd City of Woodstock, County of Oxford N0J 1W0

You have applied under section 20.2 of Part II.1 of the <u>Environmental Protection Act</u>, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the establishment of sewage infrastructure and stormwater management Works to serve the Oxford County Compost Facility, located in the City of Woodstock, for the collection, transmission, treatment and disposal of stormwater runoff from a total catchment area of 5.97 hectares, to provide Enhanced Level water quality protection and erosion control, and to attenuate post-development peak flows to pre-development peak flows for all storm events up to and including the 50-year storm event, discharging to the Hooper Drain, consisting of the following:

Proposed Works:

- **storm sewer** approximately 60 metres in length and 525 millimetres in diameter, located on the south-west corner of the proposed Oxford County Compost Facility concrete pad expansion, collecting stormwater runoff and discharging to though an upsized 600 millimetre diameter storm sewer to the wet pond forebay described below;
- **one (1) CSP culvert** approximately 21 metres in length and 675 millimetres in diameter, located below the new access road at the entrance of the new compost pad;
- grassed swale located on the south end of the wet pond forebay, with a 1.0 metre flat bottom and 3:1 side slopes discharging to the south wet pond forebay inlet;
- stormwater management facility (catchment area 5.97 hectares): one (1) clay-lined wet pond

with sediment forebay, located south of the existing compost pad having a permanent storage volume of 3,255 cubic metres, an extended detention volume of 450.6 cubic metres, and a total storage volume of 7,975 cubic metres including the permanent pool, at a total depth of 1.9 metres, an inlet structure consisting of a 600 millimetre diameter storm inlet pipe and a concrete headwall, an outlet structure comprised of a 200 millimetre diameter storm outlet pipe equipped with a 75 millimetre diameter orifice, allowing a maximum discharge of 0.009 cubic metres per second under the 100-year storm event to the Hooper Drain;

Previous Works approved under the Approval No. 4022-A8YQ6R dated May 24, 2016:

• Removal of the stormwater catch basins, located on the west side of the existing leaf and yard waste composting area and replacing them with a ditch, running along the west side of the leaf and yard waste composting area, the ditch will connect with the underground piping directing the stormwater in to an existing stormwater retention pond located on the south of the compost pad;

Previous Works approved under the Approval No. 8633-76AHSG dated August 29, 2007:

- approximately 132 m long 300 mm diameter solid pipe running along the west side of the composting pad collecting stormwater runoff and discharging through approximately 85 m long 300 mm diameter storm sewer to a forebay described below;
- approximately 50 m long 200 mm diameter storm sewer collecting stormwater runoff from the areas located east and north side of the biosolids centralized storage building through manholes CBMH2 and DICB1 discharging to a forebay described below;
- approximately 300 m long perimeter ditches collecting stormwater runoff from the biosolids centralized storage building and areas located south and west side of the biosolids centralized storage building discharging through a 300 mm diameter CSP culvert to a forebay described below;
- one (1) 18.0 m long 1.0 m deep forebay with 3H:1V side slopes equipped with rip rap covered two (2) inlet structures and one (1) 2.5 m wide 0.6 m deep concrete weir outlet structure discharging to a wet detention pond described below;
- one (1) extended wet detention stormwater pond with approximate top dimensions of 78 m long x 38 m wide and side slopes of 5H:1V, providing a permanent storage capacity of 1,564 m³ with a depth of 0.9 m and an active storage capacity of 194 m³ with a depth of 0.1m, equipped with an outlet structure consisting of one (1)1200 mm diameter precast concrete manhole, one (1) 75 mm diameter orifice plate and approximately 13 m long 200 mm diameter outlet sewer discharging to an existing 450 mm diameter CSP (Hooper Drain);

including erosion/sedimentation control measures during construction and all other controls and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the submitted application and supporting documents listed in Schedule A forming part of

this Approval.

For the purpose of this environmental compliance approval, the following definitions apply:

- 1. "Approval" means this entire document and any schedules attached to it, and the application;
- 2. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
- 3. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;
- 4. "District Manager" means the District Manager of the appropriate local District Office of the Ministry, where the Works are geographically located;
- 5. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;
- 6. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;
- 7. "MNRF" means the Ministry of Natural Resources and Forestry of the government of Ontario and includes all officials, employees or other persons acting on its behalf;
- 8. "Owner" means County of Oxford and includes its successors and assignees;
- 9. "OWRA" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;
- 10. "Previous Works" means those portions of the sewage Works previously approved under an Approval;
- 11. "Substantial Completion" has the same meaning as "substantial performance" in the <u>Construction</u> <u>Lien Act</u>;
- 12. "Works" means the sewage Works described in the Owner's application, and this Approval.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITIONS

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

- 2. Except as otherwise provided by these Conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.
- 3. Where there is a conflict between a provision of any document in the schedule referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.
- 4. Where there is a conflict between the documents listed in Schedule A and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.
- 5. The conditions of this Approval are severable. If any condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.
- 6. The issuance of, and compliance with the conditions of, this Approval does not:
 - a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority/MNRF necessary to construct or operate the sewage works; or
 - b. limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

2. EXPIRY OF APPROVAL

- 1. This Approval will cease to apply to those parts of the Works which have not been constructed within five (5) years of the date of this Approval.
- 2. In the event that completion and commissioning of any portion of the Works is anticipated to be delayed beyond the specified expiry period, the Owner shall submit an application of extension to the expiry period, at least twelve (12) months prior to the end of the period. The application for extension shall include the reason(s) for the delay, whether there is any design change(s) and a review of whether the standards applicable at the time of Approval of the Works are still applicable at the time of request for extension, to ensure the ongoing protection of the environment.

3. CHANGE OF OWNER

1. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:

- a. change of Owner;
- b. change of address of the Owner;
- c. change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act*, R.S.O. 1990, c.B17 shall be included in the notification to the District Manager; or
- d. change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act*, R.S.O. 1990, c. C39 shall be included in the notification to the District Manager.
- 2. In the event of any change in ownership of the Works, other than a change to a successor municipality, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager and the Director.
- 3. The Owner shall ensure that all communications made pursuant to this condition refer to the number at the top of this Approval.

4. UPON THE SUBSTANTIAL COMPLETION OF THE WORKS

- 1. Upon the Substantial Completion of the Works, the Owner shall prepare a statement, certified by a Professional Engineer, that the works are constructed in accordance with this Approval, and upon request, shall make the written statement available for inspection by Ministry personnel.
- 2. Within six months of the Substantial Completion of the proposed works, a set of as-built drawings showing the works "as constructed" shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the Works for the operational life of the Works.

5. MONITORING AND RECORDING

- 1. The Owner shall carry out the following monitoring program:
 - i. All samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.
 - ii. The Owner shall collect a grab sample from a designated sampling location of the stormwater management pond **at a semi-annual frequency** (during spring and fall after a significant rainfall event causing a stormwater discharge from the stormwater management pond) and analyse for the parameters listed in Table 1.

Table 1 - Stormwater Monitoring

Parameters

- Alkalinity
- Total Ammonia Nitrogen Total Phosphorus
- Chloride
- Iron
- Nitrate Nitrogen
- Nitrite Nitrogen

- pH
- Total Suspended Solids
- Sulphate
- Biological Oxygen Demand ($CBOD_{s}$)
- Chemical Oxygen Demand (COD)
- Total Kjeldahl Nitrogen • Phenol

Field Parameters

- pH
- Temperature
- Conductivity
- Dissolved Oxygen

- 2. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:
 - i. the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended from time to time by more recently published editions;
 - ii. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions;
 - iii. the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions;
- 3. The Owner shall retain for a minimum of three (3) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval

6. OPERATION AND MAINTENANCE

- 1. If applicable, any proposed storm sewers or other stormwater conveyance in this Approval can be constructed but not operated until the proposed stormwater management facilities in this Approval or any other Approval that are designed to service the storm sewers or other stormwater conveyance are in operation.
- 2. The Owner shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the Works do not constitute a safety or health hazard to the general public.
- 3. The Owner shall inspect and ensure that the design minimum liquid retention volume is maintained in the Works at all times, except when maintenance is required.
- 4. The Owner shall undertake an inspection of the condition of the Works, at least once a year, and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the Works to prevent the excessive build-up of sediment, oil/grit, debris and/or decaying vegetation, to avoid reduction of the capacity and/or permeability of the Works, as applicable. The Owner shall also regularly inspect and clean out the inlet to and

outlet from the Works to ensure that these are not obstructed.

- 5. The Owner shall construct, operate and maintain the Works with the objective that the effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen, foam or discoloration on the receiving waters.
- 6. The Owner shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the Owner's administrative office for inspection by the Ministry. The logbook shall include the following:
 - a. the name of the Works; and
 - b. the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed and method of clean-out of the Works.
- 7. The Owner shall prepare an operations manual prior to the commencement of operation of the Works that includes, but is not necessarily limited to, the following information:
 - a. operating and maintenance procedures for routine operation of the Works;
 - b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;
 - c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;
 - d. contingency plans and procedures for dealing with potential spills and any other abnormal situations and for notifying the District Manager; and
 - e. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
- 8. The Owner shall maintain the operations manual current and retain a copy at the Owner's administrative office for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.

7. TEMPORARY EROSION AND SEDIMENT CONTROL

1. The Owner shall install and maintain temporary sediment and erosion control measures during construction and conduct inspections once every two (2) weeks and after each significant storm event (a significant storm event is defined as a minimum of 25 millimetres of rain in any 24 hours period). The inspections and maintenance of the temporary sediment and erosion control measures shall continue until they are no longer required and at which time they shall be removed and all disturbed areas reinstated properly.

2. The Owner shall maintain records of inspections and maintenance which shall be made available for inspection by the Ministry, upon request. The record shall include the name of the inspector, date of inspection, and the remedial measures, if any, undertaken to maintain the temporary sediment and erosion control measures.

8. REPORTING

- 1. One (1) week prior to the start-up of the operation of the Works, the Owner shall notify the District Manager (in writing) of the pending start-up date.
- 2. The Owner shall, upon request, make all reports, manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
- 3. The Owner shall prepare a performance report within ninety (90) days following the end of the period being reported upon, and submit the report(s) to the District Manager when requested. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall be prepared to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:
 - a. a summary and interpretation of all stormwater monitoring results undertaken in the reporting period;
 - b. a comparison of the stormwater monitoring results to the Provincial Water Quality Objectives (PWQO) and a summary of any exceedances to the PWQO along with all corrective actions taken to improve stormwater runoff quality to address the exceedances;
 - c. a description of any operating problems encountered and corrective actions taken;
 - d. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works, including an estimate of the quantity of any materials removed from the Works;
 - e. a summary of any complaints received during the reporting period and any steps taken to address the complaints;
 - f. a summary of all spill or abnormal discharge events; and
 - g. any other information the District Manager requires from time to time.

9. RECORD KEEPING

1. The Owner shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the operation, maintenance and monitoring activities required by this Approval.

Schedule A

- A. List of supporting documentation / information received, reviewed and relied upon in the issuance of this Approval;
 - 1. Application for Environmental Compliance Approval, dated June 22, 2022 and received on June 30, 2022, submitted by WSP on behalf of Oxford County;
 - 2. Storm Sewer Design Sheet, Oxford County Landfill Composting Pad, dated April 24, 2023, prepared by WSP;
 - 3. Stormwater Management Report, County of Oxford Biosolids and Compost Facility Expansion, dated April 24, 2023, prepared by WSP;
 - 4. Pipe Data Form, submitted by WSP;
 - 5. Upper Thames River Conservation Authority Clearance Letter, email dated April 11 2022;
 - 6. Engineering Drawings, signed stamped and dated April 24, 2023, prepared by WSP;
 - 7. Response to Information Request, email dated May 2 2023, prepared by WSP.
- B. List of supporting documentation / information received, reviewed and relied upon in the issuance of Approval No. 4022-A8YQ6R dated May 24, 2016;
 - 1. Application for Approval January 25, 2016 and received on January 27, 2016, prepared by County of Oxford, along with all the other supporting documentation and drawings.
 - 2. Email dated April 26, 2016 Mark Maxwell, Project Engineer & Construction Coordinator, County of Oxford, providing additional information/drawings.
- C. List of supporting documentation / information received, reviewed and relied upon in the issuance of Approval No. 8633-76AHSG dated August 29, 2007;
 - 1. Application for Approval of Municipal and Private Sewage Works submitted by The Corporation of the County of Oxford dated May 15, 2007, and design specifications and drawings prepared by MTE Consultants Inc., Kitchener, Ontario including the following document:
 - 2. "Stormwater Management Report Biosolids Storage Facility, Oxford County Road 46, Township of South West Oxford" revised June 2007, prepared by MTE Consulting Inc.

The reasons for the imposition of these terms and conditions are as follows:

- 1. Condition 1 is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted. This condition is also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. Condition 1.6 is included to emphasize that the issuance of this Approval does not diminish any other statutory and regulatory obligations to which the Owner is subject in the construction, maintenance and operation of the Works. The Condition specifically highlights the need to obtain any necessary conservation authority approvals. The Condition also emphasizes the fact that this Approval doesn't limit the authority of the Ministry to require further information.
- 2. Condition 2 is included to ensure that, when the Works are constructed, the Works will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.
- 3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to the approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.
- 4. Condition 4 is included to ensure that the Works are constructed in accordance with the approval and that record drawings of the Works "as constructed" are maintained for future references.
- 5. Condition 5 is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained at a level which is consistent with the design objectives specified in the Approval and that the Works does not cause any impairment to the receiving watercourse
- 6. Condition 6 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from the Works are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the Works. The Condition also ensures that adequate storage is maintained in the Works at all times as required by the design. Furthermore, this Condition is included to ensure that the Works are operated and maintained to function as designed.
- 7. Condition 7 is included as installation, regular inspection and maintenance of the temporary sediment and erosion control measures is required to mitigate the impact on the downstream receiving watercourse during construction until they are no longer required.
- 8. Condition 8 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.
- 9. Condition 9 is included to require that all records are retained for a sufficient time period to adequately evaluate the long-term operation and maintenance of the Works.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 4022-A8YQ6R issued on May 24, 2016

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me and the Ontario Land Tribunal within 15 days after receipt of this notice, require a hearing by the Tribunal. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Notice") shall state:

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the *Environmental Protection Act*, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

- 1. The name of the appellant;
- 2. The address of the appellant;
- 3. The environmental compliance approval number;
- 4. The date of the environmental compliance approval;
- 5. The name of the Director, and;
- 6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*		The Director appointed for the purposes of Part II.1 of
Ontario Land Tribunal		the Environmental Protection Act
655 Bay Street, Suite 1500	and	Ministry of the Environment, Conservation and Parks
Toronto, Ontario	and	135 St. Clair Avenue West, 1st Floor
M5G 1E5		Toronto, Ontario
OLT.Registrar@ontario.ca		M4V 1P5

* Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 8th day of May, 2023

H. Ahmed

Aziz Ahmed, P.Eng. Director

appointed for the purposes of Part II.1 of the *Environmental Protection Act*

AN/

c: District Manager, DWECD, MECP London - District Marian Tanase, WSP Canada

APPENDIX B

2023 and Historical Analytical Results

Table B-1: Summary of 2023 Analytical Results - Surface Water Quality Objectives Oxford County Compost Site

D		Surface Water	Criterion	SWM Pond
Parameter	Units	Criterion	Source	8-Nov-23
Field Parameters				
pН	pH units	6.5 - 8.5	PWQO	8.07
Temperature	°C	nc		7.4
Conductivity	μS/cm	nc		680
Dissolved Oxygen	mg/L	4-7 (temp dependent)	PWQO ^A	11.72
Laboratory Parameters				
Alkalinity	mg/L	+	PWQO	216
Total Ammonia	mg/L	(temp and pH dependent)	CEQG ^B	0.4
Chloride	mg/L	120	CEQG	53
Iron	mg/L	0.300	PWQO	0.537
Nitrate	mg/L	13	CEQG	3.80
Nitrite	mg/L	0.060	CEQG	0.08
Total Kjeldahl Nitrogen	mg/L	nc		4.4
рН	pH units	6.5 - 8.5	PWQO	8.30
Total Phosphorus	mg/L	0.03	PWQO ^C	0.181
Total Suspended Solids	mg/L	25	CEQG ^D	10
Sulphate	mg/L	nc		29
CBOD ₅	mg/L	nc		6
Chemical Oxygen Demand	mg/L	nc		32
Phenols	mg/L	0.001	PWQO	<0.002

Notes:

• PWQO - Provincial Water Quality Objectives (July 1994 with updates).

• CEQG - Canadian Environmetal Quality Guidelines - Water Quality for the Protection of Aquatic Life, Freshwater, Long Term.

• Bold and shading indicates an exceedance of the PWQO criterion.

• *italics* indicates an exceedance of the CEQG criterion.

• nc - no PWQO/CEQG criterion available.

• + alkalinity should not decrease by more than 25% of the natural concentration.

• ^A dissolved oxygen guideline is temperature dependent: value should not be less than the range of 4 mg/L (0 °C) to 7 mg/L (25 °C) for warm water biota

• ^B total ammonia guideline is pH and temperature dependent.

• ^C indicates an interim PWQO.

• ^D For "clear flow" - maximum increase of 25 mg/L from background levels for short-term exposure; maximum average increase of 5 mg/L for longer term exposure.

****\]]

Table B-2: Historic Analytical Results - SWM Pond **Oxford County Compost Site**

				Field I	Parameters								Laboratory	y Paramete	rs					
Sample Location	Sample Date	Parameter:	рН	Temperature	Conductivity	Dissolved Oxygen	Alkalinity	Total Ammonia	Chloride	Iron	Nitrate	Nitrite	Total Kjeldahl Nitrogen	рН	Total Phosphorus	Total Suspended Solids	Sulphate	CBOD₅	Chemical Oxygen Demand	Phenols
		Units:	pH units	°C	μS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SWM Pond	Jun-08		8.80	21.3	717	8.50	124	0.3	110	0.67	2.72	0.10	3.8	7.65	0.120	60	69	12	38	0.002
	Nov-08		7.20	3.0	756	8.05	194	0.7	69	0.77	6.08	0.06	1.5	7.97	0.440	22	32	8	40	0.004
	Apr-09		7.80	21.3	747	9.06	215	0.3	83	1.61	7.13	0.11	3.0	8.20	0.220	41	41	4	35	0.000
	Aug-09		8.73	26.4	509	17.75	150	0.1	58	0.51	1.23	0.11	0.9	8.70	0.200	21	18	9	130	0.002
	Dec-09			3.9	604	8.56	201	0.1	38	0.78	9.46	0.06	0.5	7.77	0.320	40	23	4	8	0.002
	Apr-10		8.44	12.2	460	9.10	187	0.2	50	0.86	10.4	0.11	1.0	8.51	0.160	43	23	9	39	0.002
	Nov-10		7.90	10.7	660	5.35	196	1.4	130	1.77	0.40	0.06	3.9	7.99	0.270	53	29	4	59	0.002
	Apr-11		6.90	4.1	847	12.77	235	0.2	110	1.12	4.89	0.06	1.8	9.00	0.139	49	30	4	25	0.002
	Oct-11		7.70	10.6	563	4.50	208	0.7	67	2.06	2.65	0.08	3.6	8.02	0.047	33	24	5	63	0.002
	May-12		8.70	8.9	614	5.54	186	0.1	87	1.37	0.98	0.06	1.4	8.31	0.143	25	28	5	23	0.002
	Oct-12		7.80	10.2	687	5.18	181	0.4	99	4.26	0.60	0.06	6.9	7.95	0.586	44	30	11	93	0.002
	Apr-13		7.51	11.0	569	6.64	157	0.2	62	3.05	5.80	0.03	2.9	8.16	0.244	51	1/	4	61	0.002
	Nov-13		7.34	7.6	1/5	7.45	204	0.5	38	2.15	6.26	0.05	3.4	8.18	0.512	35	1/	4	40	0.002
	Jun-14		7.65	22.5	NA	5.24	183	0.01	61	0.596	1.61	0.05	3.7	8.19	0.198	29	21	9	32	0.002
	NOV-14		8.06	4.5	873	7.49	186	0.4	56	4.93	3.05	0.05	5.2	8.12	0.526	89	29	6	23	0.002
	Jun-15		8.33	14.5	660	10.17	166	<0.01	100	1.04	6.64	<0.03	33.9	8.18	0.267	40	25	13	61	<0.002
	Oct-15		7.93	9.6	590	0.00	153	0.4	67	10.0	0.30	<0.03	5.3	8.03	1.20	160	31	12		0.012
	Apr-16		7.70	10.1	592	7.00	142	0.1	30	5.27	1.84	<0.03	3.2	8.00	0.437	44	42	~4	34	<0.002
	Nov-10		0.32	10.1	506	10.34	104	0.01	61	2.00	2.06	~0.03	3.1	7.03	0.551		13		27	0.000
	Nov 17		7.30	8.0	820	0.00	165	0.01	74	0.952	2.00	0.03	4.0	0.05	0.100	2J E4	17	4	21	0.002
	Nov-17 Mov. 19		7.07	14.5	600	7.00	100	0.3	56	6.95	4.60	0.03	4.5	7.67	0.395	102	20	10	94	0.004
	Oct-18		7.03	20.5	450	13.50	231	0.2	120	1.62	4.09	0.04	4.0	8.00	0.417	65	20	15	/0	0.003
	Jun-19		8 71	20.0	290	10.65	138	0.1	84	1.02	0.06	0.00	4.0	8.04	0.202	72	13	36	91	0.002
	Oct-19		7 10	16.7	610	2 20	317	0.1	220	0.923	1.69	0.03	1.3	7.83	0.199	17	36	4	36	0.000
	May-20		7.41	12.6	280	8.19	164	0.2	40	0.881	5.17	0.04	5.2	8.16	0.230	56	19	4	39	0.004
	Oct-20		7.55	14.3	220	6.42	149	0.2	66	3.87	0.20	0.03	4.6	7.96	0.550	118	33	15	110	0.002
	Apr-21		6.97	15.6	300	14.05	174	0.1	100	0.543	0.12	0.03	2.6	8.24	0.130	27	19	15	21	0.002
	Sep-21		7.62	21.5	660	9.48	184	0.1	89	1.27	0.11	0.03	2.0	7.91	0.137	57	19	24	57	0.002
	Apr-22		7.45	8.3	840	0.37	255	0.1	120	1.02	3.79	0.03	4.5	7.90	0.131	36	21	12	21	0.004
	Sep-22		7.72	13.3	450	6.90	134	0.5	59	1.78	0.20	< 0.03	8.2	7.78	0.357	77	23	33	48	0.004
	Apr-23		7.56	8.2	270	9.16	130	<0.1	49	8.28	2.92	0.06	4.4	7.98	0.459	88	22	13	21	<0.002
	Nov-23		8.07	7.4	680	11.72	216	0.4	53	0.537	3.80	0.08	4.4	8.30	0.181	10	29	6	32	<0.002

Notes: • blank indicates parameter not analyzed during sampling event

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APPENDIX C

2023 Laboratory Certificates of Analysis



SGS Canada Inc. P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO Phone: 705-652-2000 FAX: 705-652-6365

County of Oxford (Woodstock Industrial)

195 Admiral St. Woodstock, ON N4S 7W5, Canada

Phone: 519-537-8531 Fax:

21-April-2023

Date Rec. :	06 April 2023
LR Report:	CA13284-APR23
Reference:	Storm Water Pond BCSF

Copy: #1

CERTIFICATE OF ANALYSIS **Final Report**

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	6: 34246 Storm Water Pond BCSF
Sample Date & Time					05-Apr-23 10:00
Temperature Upon Receipt [°C]					12.0
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	06-Apr-23	16:57	11-Apr-23	14:36	13
Alkalinity [mg/L as CaCO3]	10-Apr-23	15:23	12-Apr-23	11:15	130
pH [No unit]	10-Apr-23	15:23	12-Apr-23	11:15	7.98
Total Kjeldahl Nitrogen [as N mg/L]	12-Apr-23	15:48	17-Apr-23	10:21	4.4
Total Suspended Solids [mg/L]	10-Apr-23	20:20	11-Apr-23	13:52	88
Sulphate [mg/L]	12-Apr-23	07:36	12-Apr-23	19:13	22
Chloride [mg/L]	12-Apr-23	07:38	12-Apr-23	19:13	49
Nitrite (as N) [mg/L]	11-Apr-23	20:06	14-Apr-23	10:43	0.06
Nitrate (as N) [mg/L]	11-Apr-23	20:06	14-Apr-23	10:43	2.92
Nitrate + Nitrite (as N) [mg/L]	11-Apr-23	20:06	14-Apr-23	10:43	2.98
4AAP-Phenolics [mg/L]	11-Apr-23	09:14	12-Apr-23	09:26	< 0.002
Ammonia+Ammonium (N) [as N mg/L]	11-Apr-23	15:27	12-Apr-23	11:18	< 0.1
Iron (total) [mg/L]	14-Apr-23	09:18	20-Apr-23	16:55	8.28
Phosphorus (total) [mg/L]	14-Apr-23	09:18	20-Apr-23	16:55	0.459
Chemical Oxygen Demand [mg/L]	08-Apr-23	08:39	11-Apr-23	14:36	21

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Carrie Greenlaw Project Specialist, Environment, Health & Safety

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Results relate only to the sample tested. Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.) Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples. SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or



SGS Canada Inc. P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO Phone: 705-652-2000 FAX: 705-652-6365

County of Oxford (Woodstock Industrial)

195 Admiral St. Woodstock, ON N4S 7W5, Canada

Phone: 519-537-8531 Fax:

23-November-2023

Date Rec. :	09 November 2023
LR Report:	CA14303-NOV23
Reference:	Storm Water Pond BCSF

Copy: #1

CERTIFICATE OF ANALYSIS **Final Report**

Analysis	1:	2:	3:	4:	6:
•	Analysis	Analysis Start	Analysis	Analysis	34246 Storm Water
	Start Date	Time	Completed Date	Completed	Pond BCSF
				Time	
Sample Date & Time					08-Nov-23 09:00
Temperature Upon Receipt [°C]					6.5
pH [No unit]	10-Nov-23	15:40	13-Nov-23	12:01	8.31
Total Kjeldahl Nitrogen [as N mg/L]	10-Nov-23	12:52	14-Nov-23	10:15	4.4
Ammonia+Ammonium (N) [as N mg/L]	10-Nov-23	20:23	13-Nov-23	11:24	0.4
Total Suspended Solids [mg/L]	14-Nov-23	13:37	15-Nov-23	09:56	10
Alkalinity [mg/L as CaCO3]	10-Nov-23	15:40	13-Nov-23	12:01	216
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	10-Nov-23	16:56	15-Nov-23	13:42	6
Nitrite (as N) [mg/L]	12-Nov-23	13:05	13-Nov-23	19:12	0.08
Nitrate (as N) [mg/L]	12-Nov-23	13:05	13-Nov-23	19:12	3.80
Nitrate + Nitrite (as N) [mg/L]	12-Nov-23	13:05	13-Nov-23	19:12	3.88
Sulphate [mg/L]	23-Nov-23	11:10	23-Nov-23	15:15	29
Chloride [mg/L]	23-Nov-23	11:12	23-Nov-23	15:15	53
4AAP-Phenolics [mg/L]	10-Nov-23	13:44	15-Nov-23	07:55	< 0.002
Iron (total) [mg/L]	13-Nov-23	13:58	15-Nov-23	16:21	0.537
Phosphorus (total) [mg/L]	13-Nov-23	13:58	15-Nov-23	16:21	0.181
Chemical Oxygen Demand [mg/L]	14-Nov-23	09:32	15-Nov-23	13:42	32

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Carrie Greenlaw Project Specialist, Environment, Health & Safety

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