Overview of O. Reg. 406/19 – On-Site and Excess Soil Management

Ruxandra Côté

February 2021

Key Exemptions

EXEMPTIONS IN ONTARIO REGULATION 406-19

- EXEMPTIONS FROM ECAs
  - Hauling of excess soil (dry or liquid)
    - Rules do apply to containment and safety during transport and requirement for haulers to provide information if asked
  - Low risk on-site processing (passive dewatering, some mixing of soil, debris sorting, additives for solidification during transportation)
  - Temporary soil storage sites (Class 2)

- EXEMPTIONS FROM O.REG. 406-19
  - If less than 100 m^3 is moved to Class 1 (not Class 2)
  - Soil movement as a result of maintaining infrastructure in a state of disrepair or emergency
  - Soil is transported from one infrastructure project to another.
  - Less than 2000 m^3 moved from settlement area (not contaminated, not for remediation)
  - Movement of topsoil

EXEMPTIONS IN ONTARIO REGULATION 406-19

- SITE-SPECIFIC INSTRUMENTS
  - **Do not exempt you from O. Reg. 406-19, but can offer relief on SCS applied and/or sampling frequency**
  - A permit issued under a by-law passed under Section 142 of the Municipal Act, 2001 or Section 105 of the City of Toronto Act, 2006
  - Provisions of a by-law passed under Section 142 of the Municipal Act, 2001 or Section 105 of the City of Toronto Act, 2006
  - A license or permit issued under the Aggregate Resources Act
  - An approval under the Planning Act
  - A Certificate of Property Use
  - Any other site-specific instrument under an Act of Ontario or Canada that may regulate the quality or quantity of soil that may be deposited for final placement at the reuse site

Options for Reuse and Disposal

Options for Reuse and Disposal

- Soil can be segregated and treated on-site (debris removal, some soil mixing, passive dewatering). Needs to be tested per Regulation (following slides).
- Depending on soil quality (soil meeting Table 2.1 to 9.1 or BRAT generated SCS or reuse site instrument), soil can be taken to a “Reuse Site”
- If soil quality is good (meets Table 2.1 to 9.1) and the Reuse Site cannot accommodate the soil, up to 10,000 m^3 of soil can be temporarily (up to 5 years) stored at a Class 2 facility
  - Soil quality and characterization should take place prior to soil arriving at Class 2 facility
- If no other options exist, then soil needs to be taken to a Class 1 facility

ADVANCE PLANNING IS KEY!

BENEFICIAL REUSE ASSESSMENT TOOL

(Version 1.1)

Prepared by: Ontario Ministry of the En
Technical Assessment and
Toronto, Ontario, Canada

NOTE: Statements Listed in Rows 16, 18 and 20 Need to Be Confirmed to Assess the Eligibility of Using the BRAT to Generate Site Specific Exce

as specified in the "Soil Rules" and "BRAT User Guide", have been reviewed and met.

"Shallow Soil Cap" - Soil Cap (>50cm)"	Select Y/N
"Fill Cap or Hard Cap (Asphalt or Concrete Cap, or soil cap >1m thick)"	Select Y/N
"Building Prohibition"	Select Y/N
"Building with Storage Garage" *(Ontario Building Code: ventilation rate = intermittent 3.9 L/s)*	Select Y/N
"Building with no First Storey Residential Use"	Select Y/N

SITE SPECIFIC STANDARDS

JANUARY 1, 2021

- If soil in excess of 350 m^3 is to be excavated and taken to a Reuse Site*, the following new sets of more stringent Standards apply:

Category	Soil Volume < 350 m^3	Soil Volume > 350 m^3
Full Depth, Background	Table 1	Table 1
Full Depth, Potable	Table 2	Table 2.1
Full Depth, Non-Potable	Table 3	Table 3.1
Stratified, Potable	Table 4	Table 4.1
Stratified, Non-Potable	Table 5	Table 5.1
Full Depth, Shallow Soil, Potable	Table 6	Table 6.1
Full Depth, Shallow Soil, Non-Potable	Table 7	Table 7.1
Full Depth, Within 30 m of a Water Body, Potable	Table 8	Table 8.1
Full Depth, Within 30 m of a Water Body, Non-Potable	Table 9	Table 9.1

- Leachate analysis is also mandatory for volumes greater than 350 m^3.
- *refers to ***total*** volume to be placed at a Reuse Site. BRAT can also be used to generate site-specific standards (site-specific instrument needs to be obtained)

WHEN ASSESSING A SOURCE SITE, ENSURE IT NOT ONLY MEETS SCS FOR RSC, BUT ALSO FOR WHERE YOU PLAN TO TAKE THE SOIL

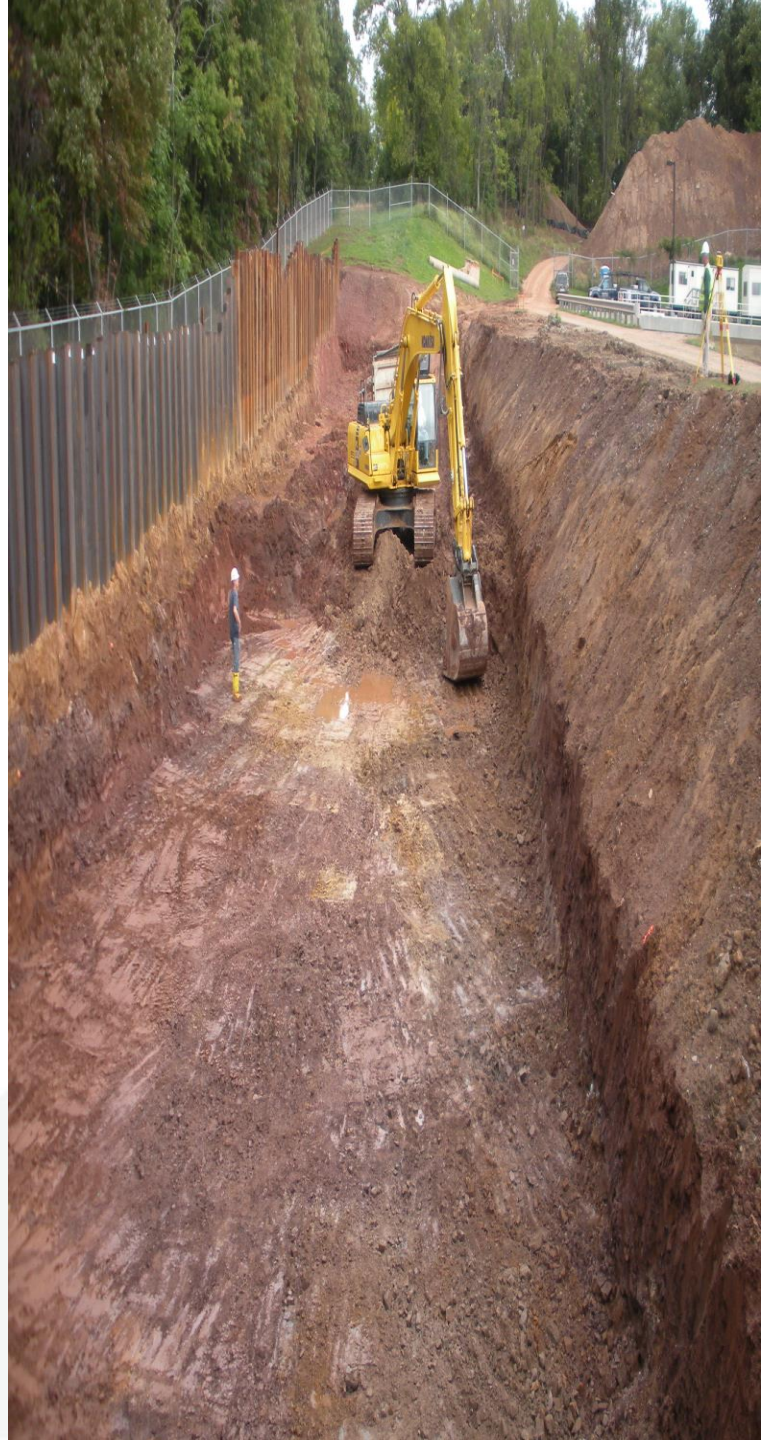
SOIL SAMPLING REQUIREMENTS (IN-SITU)

JANUARY 1, 2022

- Sampling Guidelines
  - Need to collect samples for: PHC F1-F4, BTEX, metals including hydride forming, EC and SAR (only if from parking lot), any pCOC identified in the past uses report
  - Leachate analysis
  - QP determines number of pH samples
- Sampling Frequency:

Volume to be Excavated (m^3)	Number of Samples
<600	3 soil samples
>600 – 10,000	1 soil sample per each 200 m^3
>10,000 – 40,000	1 soil sample per each additional 450 m^3 after the first 10,000 m^3
>40,000	1 soil sample for each additional 2,000 after the first 40,000 m^3

- Per above, if 30,000 m^3 need to be excavated, **95 samples (and 10 field duplicates)** would be required



SOIL SAMPLING REQUIREMENTS (EX-SITU)

JANUARY 1, 2022

- If an in-situ sampling approach is not practical or feasible, soil samples shall be collected from stockpiles where the soil is temporarily stored
- Sampling Guidelines
  - Same parameters as in-situ sampling
  - Do not collect from surface of stockpile; allow for collection of samples from entire stockpile including the core. Sampling Frequency: as per O. Reg. 153/04

Stockpile Volume (m^3)	Minimum Number of Samples
≤ 130	3
> 130 to 220	4
> 220 to 320	5
> 320 to 430	6
> 430 to 550	7
> 550 to 670	8
> 670 to 800	9
> 800 to 950	10
> 950 to 1100	11
> 1100 to 1250	12
> 1250 to 1400	13
> 1400 to 1550	14
> 1550 to 1700	15
> 1700 to 1850	16
> 1850 to 2050	17
> 2050 to 2200	18
> 2200 to 2350	19

Stockpile Volume (m^3)	Minimum Number of Samples
> 2350 to 2500	20
> 2500 to 2700	21
> 2700 to 2900	22
> 2900 to 3100	23
> 3100 to 3300	24
> 3300 to 3500	25
> 3501 to 3700	26
> 3700 to 3900	27
> 3900 to 4100	28
> 4100 to 4300	29
> 4300 to 4500	30
> 4500 to 4700	31
> 4700 to 5000	32
> 5000	N = 32 + (V-5000)/300

Per above, if 30,000 m^3 need to be excavated, **115 samples (and 12 field duplicates)** would be required

New Reporting and Record Keeping

NEW REPORTING REQUIREMENTS

JANUARY 1, 2022

- Assessment of Past Uses (similar to Phase One ESA, dictates what pCOCs to sample)
- Sampling and Analysis Plan
- Excess Soil Characterization Report
  - Determine quality of excess soil
- Excess Soil Destination Assessment Report
- Tracking System
  - If a notice on registry is required (few exemptions exist), each load of excess soil must be tracked during transportation and deposit at the Reuse Site
- **Key information from the above reports must be included in the notice filed on the registry**
- **All reporting and tracking to be completed under QP oversight**
- Ontario Environment Industry Association - Hauling Best Practices (oneia.ca)

SOIL EXPORTATION/IMPORTATION

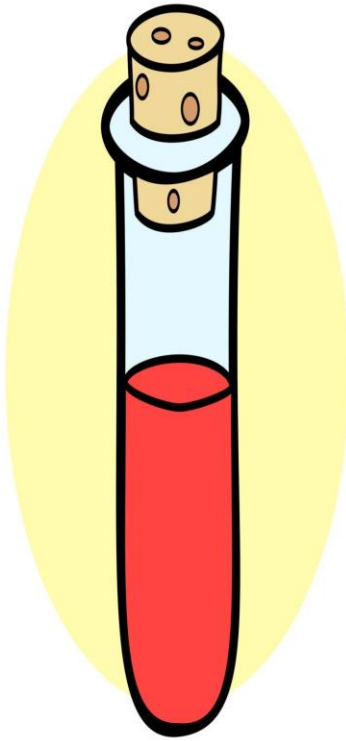
JANUARY 1, 2021

- If soil meets Tables 1-9 or 2.1-9.1, including leachate testing where appropriate, a Re-use site* can be located
  - 1 sample shall be analyzed for each 160 m^3 for the first 5,000 m^3
  - 1 sample shall be analyzed for each 300 m^3 after the first 5,000 m^3

    OR
  - Testing requirements, frequency, reporting and tracking need to follow **O. Reg. 406-19** as previously described (refer to Slides 5 to 7)
  - *RSC property requirement. Due diligence guidelines apply if RSC not required.

JANUARY 1, 2022

- If soil meets Tables 1-9 or 2.1-9.1, including leachate testing where appropriate, a Re-use site can be located
  - Testing requirements, frequency, reporting and tracking need to follow **O. Reg. 406-19** as previously described (refer to Slides 5 to 7)



KEY DATES

DATE	
January 1, 2021	- New SCS - BRAT tool
January 1, 2022	- New reporting and tracking requirements - Hauling records required - Larger reuse site registration
January 1, 2025	- Restrict deposit of clean soil at landfill sites (unless soil is needed for cover or functioning of landfill)
January 1, 2026	- Grandfathering exemption expires (for contracts entered prior to January 1, 2021)

ADVANCE PLANNING IS KEY!


Questions + Answers


exp com