

DATE OF MEETING | MAY 14, 2018 |
AUTHORED BY | POUL ROSEN, SENIOR MANAGER, ENGINEERING |
SUBJECT | CLIFF STREET CONTAMINATED SOILS |

OVERVIEW

Purpose of Report

To respond to questions with regards to Contaminated Soils Management asked by Council at the December 5, 2016 Council Meeting.

Recommendation

That the “Cliff Street Contaminated Soils” report dated May 14, 2018 be received for information.

BACKGROUND

As part of the Cliff Street Utility Renewal project in 2016, it was necessary to excavate through areas of historic fill. This fill was suspected to contain varying levels, locations and types of contamination regulated by the Ministry of the Environment (MoE). To ensure any potentially contaminated soils were handled appropriately and in accordance with the MoE requirements, McElhanney Consulting Ltd. was retained to provide expert oversight and professional services. They provided engineering design, environmental permitting, consulted with the MoE, developed an Environmental Management Plan (EMP), completed soils testing and monitored the work. The project was completed and financial reporting was submitted to Council on December 5th, 2016.

DISCUSSION

At the December 5, 2016 Council Meeting a motion was passed that Council direct Staff to prepare a report regarding the handling of materials at the Cliff Street project. The objective of this report is to answer the following Council questions:

1. Was the BC Contaminated Sites Regulation (CSR) Schedule 7 Standards for Soil Relocation to Non-Agricultural Land (Schedule 7 Standards) met?
2. Was 106 Wall Street on the MoE registry to receive hazardous materials?
3. Was there a site recovery assessment, or an approved site to move to?
4. Is there a MoE letter of all clear?
5. Was the biocell Ministry of Environment Protocol 15 standard met?

A report addressing the questions above is attached. In summary, the answers are as follows:

1. Yes, Schedule 7 Standards were applied and adhered to.
2. 106 Wall Street is not a registered site nor did it need to be in order to complete the project. None of the soils encountered during the project were determined to be “hazardous” waste.

3. An SRA (interpreted to mean Soil Relocation Agreement) was not required.
4. There is no MoE letter of all clear required.
5. Ministry of Environment Protocol 15 for Contaminated Sites – Soil Treatment Facility Design and Operation for Bioremediation of Hydrocarbon Contaminated Soil was not applicable to the project.

No hazardous soils were encountered during the project.

Testing prior to construction confirmed the presence of contaminated soils regulated by the MoE. Given the limited space on Cliff Street, it was necessary to find a location where the soils could be sorted, tested and handled appropriately. Several potential locations for the materials handling site were reviewed; however, 106 Wall Street was chosen because of proximity to the work site and that it was already scheduled to be repaved. The proximity of the transfer site allowed the City to significantly reduce costs of material handling, disposal and importing granular backfill materials.

Prior to construction, environmental mitigation measures were developed and implemented to prepare 106 Wall Street for stockpiling and containment of excavated materials. This work included:

- Patching and sealing of potholes to create an impervious working surface.
- Installation of a containment berm and fencing around the site.
- Permitting and installation of a runoff collection system discharging to the sanitary sewer (to minimize stormwater discharge from the site).
- Erosion and sediment control measures.
- Tarping of contaminated soils as needed.

Throughout the course of construction, environmental monitoring continued to ensure that mitigation measures remained in place.

The value of using a temporary materials handling site was important in reducing the City's costs. In particular, it allowed the reuse of some of the soils in the project, saving both disposal fees and imported gravel costs. If stockpiling, testing and sorting was not possible, a worst case assumption may have been necessary requiring all the soils to be sent to disposal facilities and imported gravel to be used. For Cliff Street, the cost of this could have been as high as \$700,000 extra.

The City has a significant amount of buried infrastructure within areas of historic fill, particularly in the downtown. The use of a temporary material transfer site for contaminated material handling has been required on several City projects in the past and will continue to be needed in the future when working in areas of potential contamination.

SUMMARY POINTS

- Questions regarding the contaminated soils management have been addressed and no hazardous soils were encountered throughout the project.
- The use of a temporary transfer site for stockpiling and sorting the soils was completed with MoE guidance following best practices.
- The use of a temporary material transfer site was identified prior to tender to limit schedule, costs and impacts to construction schedule and local businesses and residents.
- Materials handling sites are an important means to control project costs when contaminated soils are encountered on projects with limited space.

ATTACHMENTS

Attachment A - Cliff Street – McElhanney Consulting Response dated February 10, 2017

Submitted by:

Poul Rosen
Senior Manager, Engineering

Concurrence by:

Bill Sims
Director of Engineering and Public Works