

30 April 2021

Reference No. 19131856-014-L-Rev0

Mr. Micheal Ukrainetz

Department of Community Services, Land Development Branch
Yukon Government
307 Black Street
Whitehorse, YT
Y1A 2N1

PHASE II ENVIRONMENTAL SITE ASSESSMENTS, DOME ROAD AREA, DAWSON CITY, YUKON TERRITORY

Dear Micheal,

Golder Associates Ltd. (Golder) was retained by Yukon Government, Department of Community Services, Land Development Unit (Community Services) to conduct a Phase II Environmental Site Assessment (ESA) at three properties (herein referred to as the “Subject Site”) located along Dome Road, in Dawson City, Yukon, as follows:

- Area A (Dome Road West/old Slinky Mine Area)
- Area D (between Dome Road and Klondike Highway)
- Lot 1059 (adjacent to Area D)

The purpose of this letter is to provide Community Services with a summary of recommendations that were provided in the Phase II ESA reports, in order to identify next steps for each of the three properties.

1.0 PROJECT CONTEXT

Between October 2019 and July 2020, Golder carried out Phase I and Phase II ESA activities at the three subject properties, on behalf of Community Services. The overall purpose of the work was to conduct environmental due diligence on behalf of Community Services in support of a future sale of the properties. Phase I and Phase II ESAs are carried out to determine whether past current activities at a subject site have affected soil and/or groundwater quality. A listing of the reports prepared by Golder for the subject sites is provided in Table 1.

Table 1: Phase I and Phase II ESA Reports

Subject Site	Report Title (Date)
Area A	Phase I and Limited Phase II Environmental Site Assessment - Area A, Dome Road West/ Old Slinky Mine Area, Dawson City, Yukon (dated 30 April 2020)
	Phase II Environmental Site Assessment - Area A, Dome Road West / Old Slinky Mine Area, Dawson City, YT (dated 29 July 2020)
Area D	Phase I and Limited Phase II Environmental Site Assessment - Area D, Between Dome Road and Klondike Highway, Dawson City, Yukon (dated 30 April 2020)
	Phase II Environmental Site Assessment - Area D, Between Dome Road and Klondike Highway, Dawson City, YT (8 September 2020)
Lot 1059	Phase I and Limited Phase II Environmental Site Assessment - Lot 1059 (adjacent to Area D), Dawson City, Yukon (dated 30 April 2020)
	Phase II Environmental Site Assessment at Lot 1059 (adjacent to Area D), Dawson City, YT (dated 29 July 2020)

Golder also carried out a determination of background metals concentrations in the vicinity of the Subject Sites. The findings of the background metals determination are summarized in the technical memorandum titled “*Determination of Local Background Metal Concentrations in Soil, Dome Road/Old Slinky Mine Area, Dawson City, Yukon*”, dated 8 September 2020.

Golder understands that the findings of the assessment work were to be used to inform the development potential of the Subject Sites, which is being evaluated as part of the City of Dawson’s Master Plan for the future Dome Road neighbourhood. This letter is intended to support the evaluation process, by providing a summary of next steps for each of the Subject Sites.

2.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS

The key findings for each of the Subject Sites are described in detail in the reports outlined in Table 1. At each of the three Subject Sites certain metals parameters (chromium and/or arsenic) in soil were measured at concentrations above the applicable soil standards outlined in the Contaminated Sites Regulation (CSR) for Residential (RL) and/or Industrial (IL) land use. Additionally, concentrations of hydrocarbon-based parameters exceeded applicable standards for RL use at Area A in surficial soils in a localized stained area. Golder notes that the findings of the Phase II ESAs do not quantify potential risks associated with the soil concentrations, nor do they prescribe mitigation strategies. The quantification of risk, or development of mitigation strategies would be conducted as part of a screening level risk assessment which may be part of a future stage of work to support potential development of the Subject Sites. Table 2, below, outlines the recommendations provided by Golder in the Phase II ESAs, in order to address the findings of the assessment work.

Table 2: Summary of Phase II ESA Recommendations

Subject Site	Recommendation	Rationale
Area A, Area D, Lot 1059	Submit the background metals memo prepared by Golder to Yukon Government, Standards and Approvals Branch for approval to use the proposed background standards on the Subject Sites.	Approval of Site-specific background concentrations would demonstrate that elevated metals concentrations are naturally-occurring and not associated with historical activities at the Subject Sites.
Area A, Area D, Lot 1059	Completion of a Screening-level Risk Assessment (SLRA) of the Subject Sites to evaluate whether elevated metal concentrations at the Subject Sites pose acceptable risks to human health and the environment, if required by Standards and Approvals Branch	A SLRA will assess exposure pathways and receptors at the Subject Sites and will provide an evaluation of whether the elevated metals concentrations meet risk-based standards. If the findings of the SLRA indicate that concentrations meet risk-based standards for both the current and proposed site use, removal of the soil would not be required prior to development of the Subject sites. Additional data collection may be required to inform the SLRA.
Area A	Depending on future land use, remediate the small volume (estimated to be < 8 m ³) of soil contaminated with heavy extractable petroleum hydrocarbons (HEPH and EPH _{C19-C32}) above CSR RL standards in the area of sample 10158-01, identified during the Phase I and limited Phase II. This would involve excavating the impacted shallow soil at surface, transporting it to an approved disposal facility, and completing confirmatory soil sampling.	In accordance with the CSR, remediation of the contaminated soil would be required in order to advance development activities at the Site.

3.0 CLOSURE

We trust that the contents of this letter are sufficient for your current review purposes. Should you have any questions, or require further information, please do not hesitate to contact the undersigned at 867-633-6076.

Sincerely,

Golder Associates Ltd.



Andrew Bruemmer, PEng (BC, YT)
 Senior Environmental Engineer



Tamra Reynolds, MSc, PGeo (BC, NT/NU)
 Associate, Senior Hydrogeologist

AB/TJR/syd

[https://golderassociates.sharepoint.com/sites/116659/project/files/6/deliverables/issued to client_for wp/19131856-014-l-rev0/19131856-014-l-rev0-summary-30apr_21.docx](https://golderassociates.sharepoint.com/sites/116659/project/files/6/deliverables/issued%20to%20client_for/wp/19131856-014-l-rev0/19131856-014-l-rev0-summary-30apr_21.docx)