



## Environmental Site Assessment

- Environmental Site assessments determine potential environmental contamination that took place while land management was Indigenous Service Canada. This process is crucial in putting all potential contamination in a report to ensure ISC is on the hook for contaminated land.

### What happens to existing environmental problems under the Indian Act?

- If there is an existing environmental problem on a reserve lane before the Land Code takes effect, the federal government continues to be responsible for the problem and liable for any of its actions that may have caused the problem.
- Before bringing a reserve under its Land Code, a First Nation is entitled to full disclosure on any environmental problems from Canada. The First Nation may decide to exclude the land from its Land Code until the problem is fixed by Canada

### What are contaminated environmental sites?

- A contaminated site defined by British Columbia is an area of land where soil, underlying groundwater, or sedimental contains any. Hazardous waste or substance in an amount exceeding provincial environmental quality standards. Many contaminated sites in BC were caused by past industrial or commercial use. Much of these contaminated sites contain substances such as heavy metals (lead, arsenic, cadmium, and mercury). Organic chemicals include benzene and toluene in gasoline which occur in about two thirds of all sites.
- These sites pose a threat to human health, the environment and safety. The possible side effects of these chemicals range from minor physical symptoms to life-threatening diseases such as cancer. Leaving children most at risk from the contaminated soil, air, water, and food. These harmful chemicals will also hurt the local fish, mammals, possibly impairing their reproduction and decimation the food chain

## Lytton Update

- In 2018, Golder Associates Ltd.1 (Golder) completed a Phase I ESA for 56 LFN properties located near Lytton, BC. During the Phase I ESA, Golder reviewed historical information, interviewed with people with knowledge of the site lands, and completed site visits to identify areas of environmental potential concern (APECs) that may pose adverse impact on the environmental quality of the sites. The Phase I ESA Update was completed for the 56 LFN properties prior to the voting on the Land Code document in the early spring of 2023. LFN has requested that the Phase I ESA Update focus on the four properties impacted by the wildfires in 2021 and 2022 and complete a limited scope of work for the remaining LFN properties. This Phase I ESA Update report should be read in conjunction with the 2018 Phase I ESA (Golder 2018).

### Conclusion

The 2018 Phase I ESA identified 34 APECs at the LFN properties, including five APECs at off-Reserve properties. Based on the results of the Phase I ESA Update, a total of 49 APECs were identified at the Reserves. This includes:

- 44 on-Reserves APECs (an increase of 15 APECs since 2018)
- 5 off-Reserve APECs

### Recommendation

It is recommended that a Phase II Environmental Site Assessment be conducted to evaluate whether the APECs identified in the Phase I ESA Update are considered areas of concern. This would include collection of soil, soil vapour and/or groundwater samples at each APEC

## ESA: Phase 1

Completed

The purpose of the Phase 1 ESA is to identify and report on any actual or potential site contamination related to the First Nations reserve land under the Framework Agreement and First Nations Land Management Act (FNLMA)

The terms of reference for the conducting of the Phase 1 ESA will be based on the Canadian Standards Association guidelines and standards for Phase 1 Environmental Site Assessments

There are four main components to the Phase 1 ESA:

1. A records Review, where the consultant will review all existing information regarding LFN Reserve Lands in Canada's possession, respecting any actual or potential environmental problems
2. A site visit, where a member of the consultant's team will be accompanied by the Liasson for LFN. In this case the Liasson will be members of the LFN Lands Development Committee
3. Interviews with LFN band members who will know the history of their land
4. Evaluation of all the information collected and a final report with recommendations of contaminated sites will be shared

The results and recommendations of this final report for the Phase 1 ESA will be summarized and incorporated in an Annex of the Individual Agreement

## ESA: Phase 2

Phase 2 of the ESA is an intrusive investigation and assessment of a property's surface and subsurface media. Phase 2 studies typically investigate "Areas of Potential Environmental Concern" (APECs). A Phase 2 ESA investigated and confirms the environmental condition of the APECs and determines the site characteristics (chemicals, contamination and concentrations) present. This information is necessary to file a Record of Site Condition (RSC) and Risk Assessment, which assess the physical pathways to human exposure, ecological effects, and the potential for off-site migration of contaminants.

The typical scope of work may include:

- Collection of soil, groundwater, surface water, sediment, or vapor samples
- Chemical analysis of samples for relevant parameters,
- Surveying the site and establishing groundwater flow direction,
- Determining the appropriate criteria to which the results must be compared

## ESA: Phase 3

Phase 3 ESA examines the need for, and methods of, remediating identified contamination on a site. If delineation was not conducted to delineate the physical extent of previously-identified contamination. Phase 3 investigations may involve intensive testing, sampling, monitoring, and the design of alternative cleanup methods, risk management strategies, costs and logistics. Phase 3 reports detail the steps needed to minimize human or ecological risk, to preform site cleanup, and conduct follow-up monitoring for residual contaminants.

If Phase 2 confirms contamination and determines that unacceptable levels of contamination exist, a Phase 3 Remedial Investigation should be carried out to determine what approach should be taken to clean up or contain the contaminants present at the site

