Sante Enviro Health (SEH) Comments on the draft Tailored Impact Statement Guidelines and the draft Public Participation Plan

Montreal, February 4, 2026

Adaptation and resilience strategies are most important when it relates to climate change impacts on road infrastructure that will be used for the transportaion of nuclear waste to the DGR. Upgrades to this road infrastructure should include their design to withstand extreme weather. They must plan and integrate climate projections into these upgrades. Essential also are monitoring of the impacts on an ongoing basis as well as managing risks using data to track environmental changes in real time and to adapt all aspects of operations. Importantly are the transportation corridors for the transfer of nuclear waste.

SEH believes this type of approach would be useful and should be incorporated in the draft Tailored Impact Statement Guidelines for the Deep Geological Repository Project.

Global Forest Watch (GFW), EOS Landviewer, EOS Data Analytics, Ouranos and Canadian Wildland Fire Information System are tools that are invaluable in helping to predict areas of concern for wildfire risk to ensure the Deep Geological Repository ERP incorporates this data into the ongoing risk analysis. SEH will be looking that these items be included in the draft Tailored Impact Statement Guidelines.

According to the IPD the Project does not include "*transportation of used fuel from reactor sites to the Project beyond primary and secondary access roads at the Project site, as this is regulated separately under CNSC certification and uses existing transportation infrastructure*" Page 8 of 92 of IPD

The deep hole is not the primary risk with this project. It is the risk as the spent nuclear material is being transported to the deep hole. The risk calculation is the number of accidents divided by per unit length of the transportation corridor. The longer the transportation corridor the higher the risk involved. Road patterns, condition of roads and effects of climate change will also impact the calculation of risk for the moving of the nuclear waste.

Although The DGR Project does not include transportation of used fuel from reactor sites to the Project site, this is a most important aspect of where the risk is calculated as the nuclear waste is transported to the DGR site.

SEH believes this aspect goes hand in hand with DGR, as without this, the project may not be sustainable. In other words, if the project is approved and the CNSC cannot de-risk the transportation corridors, then the result is a non-viable project. SEH supports a holistic approach for the DGR project. The two components are needed to support a viable repository project.

The unpackaging of the spent nuclear fuel as it arrives at the DGR is one of high risk and this should be addressed.

Emergency preparedness and response plans in the event of a release of radioactivity must be included. SEH will review Emergency Response Assistance Plans (ERAP), including REGDOC-2.10.1 Nuclear

Emergency Preparedness and Response to verify if any conditions are present in these documents are missing in the DGR project.

Emergency preparedness and response plans will be enforceable parts of the CNSC according to the statement made on Page 10 of 92 of the IPD Summary. Viewing these plans would be essential to verify if all aspects have been accounted for in all areas that would be affected both at the site and along any route that would be providing the nuclear waste to the DGR.

SEH recommends that long-term consequences of the increasing risk of wildfires warrants that infrastructure companies must adapt and prepare for these changes, using a proactive approach and these changes must be included in any ESIA, including ERPs based on these increased risks.

The generation of risk management strategies, analysis and stratification of risk, resulting from extreme weather events, are very extensive for some other elements of risk for the project. However, the risk of wildfires is ever expanding and therefore SEH recommends this should comprise a greater part in the risk analysis and management strategies, as it does not at the present time. Wildfire risk affects the construction, operation and closure phases of the Deep Geological Repository Project and must be more actively incorporated into the planning of all stages of this infrastructure project.

SEH will be looking for flooding risk mitigation measures. One of the largest issues related to flooding risk is the management of inflitration into the project site. A major rainfall event that prompts flooding, with many millimeters of rain in a very short time period is of prime concern for all of the components of the DGR project, both underground and above ground.

More scenarios than the 100 year flood should be addressed as shorter term flood events are becoming the norm. Predictions and analysis on much shorter time frames than 100 years for flooding are needed, especially considered the entire lifespan of the DGR project. Updates and upgrades of measures to deal with these risks must be provided on an ongoing basis throughout the decades and lifespan of the project.

Impacts of wildfires and flooding on the DGR infrastructure are immediate, so SEH recommends these effects must be planned as much as is possible, as early on in the planning process as possible.

Extreme weather risks will be escalating going forward, due to flooding and wildfires. SEH recommends that the risk analysis should be more inclusive of these specific risks. In other words, the risk analysis should be looking steps forward in that regard to be prepared for the inevitable events that may occur.

Deep Geological Repository must take control over what aspects it can prepare for, as there are multiple aspects, the most predominant and of concern being wildfires and flooding events.

The draft Public Participation Plan must meaningfully involve the public from the earliest phases of this project to weigh in on and incorporate these issues brought up here that will potentially impact many.

See attached Figures 1 & 2 and Appendix 1,2 & 3

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Appendix 1

Wildfire risk calculations

Wildfire science and calculations based on modeling can estimate how fast a raging wildfire can travel in an hour. Under severe burning conditions, meaning critically dry fuels and strong winds, a wildfire's forward rate of spread is approximately 10% of the prevailing wind speed. For example, a wind speed of 50 km/h would indicate that a wildfire could spread at a rate of ~5 km/h. This ratio is an estimation and ground and other conditions may alter the actual rate. However, this calculation must be taken into consideration when predicting the time needed to activate ERPs.

The factors that can also influence a wildfires spread include, terrain, vegetation type, fuel structure density of the forested areas and fuel moisture. Wildfires can last for any number of days and persist depending on multiple factors.

Peak fire risk occurs in summer with higher temperatures and after earlier higher spring temperatures, and a lack of rain. These conditions can contribute to longer duration of wildfires which can prolong wildfire risk. Lightning storms present an increased risk which is an unpredictable phenomenon, causing 93% of Canada's burned area in 2023.

Climate change amplification, due to areas of Canada warming twice as fast as the global average, is intensifying seasonal extremes and is a major concern. Wind dries out fuels ahead of the fire, supplies oxygen to intensify combustion and carries embers that can ignite spot fires kilometers away.

Global Forest Watch (GFW) is a tool that can aid in monitoring wildfires with the ability to view active fire data and thermal anomalies. Just as loss of tree cover can be observed using these tools it can be used to track where dry forest cover is present and indicate which areas are most at risk for future wildfires.

Tree cover loss data is a powerful mapping tool and has been widely used by governments, academia, private sector and civil society to identify and address deforestation. Tree cover loss data has changed over time due to adjustments in algorithms, improvement of satellite data due to improved sensitivity and satellite images becoming more available.

EOS Landviewer is also a powerful tool allowing comparison of satellite images from different dates using Sentinel-2 data and Landsat data to enable a visualization of Earth observation data over time. A download of high-resolution images is also possible.

Appendix 2

***Ouranos**, the Regional Climatology and Adaptation to Climate Change is "a collaborative innovation hub enabling society to better adapt to an evolving climate. The consortium brings together upwards of 450 researchers, experts, practitioners and decision-makers from an array of disciplines, collectively working on numerous applied research programs and projects."* https://www.ouranos.ca/en

Appendix 3

Canadian Wildland Fire Information System

The Canadian Wildland Fire Information System is a method of dealing and predicting these types of risk. The 2023 Wildfire Season contributed to increased research on effects of climate change on wildfires. Increasingly climate change can be linked to these events. Canada's 2023 wildfire season was the most destructive ever recorded. In 2023, 15 million hectares of land were consumed by wildfires, as compared with the Canadian average of 2.5 million hectares.

The research looked at how the intensity and likelihood of an extreme weather event is linked to climate change. The WWA published results soon after the event, instead of waiting for a long review process, so they can provide context and lessons learned quickly after an extreme event.

Due to warm and dry conditions in early May, the 2023 wildfire season began early, and continued on into June and July. These researchers used Natural Resources Canada's Fire Weather Index (FWI), a metric combining temperature, wind speed, relative humidity and precipitation to estimate the level of fire danger. The scientists also calculated the Cumulative Daily Severity Rating from the FWI, to assess the effects and contribution of hot and dry weather conditions from January to July.

The conclusion was that extreme weather, record high temperatures and dry conditions caused by climate change intensified the 2023 wildfires. Researchers found "wildfire-prone weather conditions in Quebec were 50 percent more intense because of climate change caused by human activity, while the peak intensity recorded was 20 percent higher".

Weather data and computer model simulations are an important tool needed for the planning of infrastructure projects, such as the Deep Geological Repository Project. Studies found at Canada's Natural Resources website https://natural-resources.canada.ca/stories/simply-science/canada-s-record-breaking-wildfires-2023-fiery-wake-call indicate that this data can assist and facilitate 'de-risking' an infrastructure project, related to wildfires.

The wildfires of June and July 2023 are a clear indication that this risk is of great importance and demands larger scrutiny and much further adaptation of risk management strategies.

Sante Enviro Health (SEH) Montreal, February 4, 2026