Comment of William Townsend

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Scoping Comment for draft SEIS

Erosion at West Valley Nuclear Site

The West Valley Nuclear site has been acknowledged as a poor location because there is active erosion on three sides of the plateau. Geologists label the site as being geologically young. Two kinds of erosion are considered most important for this site; gully head formation and sapping by ground water flowing out of the stream embankments.

Gully head formation occurs as the beginning of a gully at the edge of the plateau or by extending a gully into the plateau. Light or moderate rainfall has little if any impact on gully formation or growth because no soil is moved at the plateau edge or at the head of an existing gully. Fast flowing runoff from an intense storm on the other hand will move soil at the gully head starting a new gully or extending an existing gully into the plateau. For this reason climate change that is producing more intense storms per year has a significant impact on gully formation and growth.

Erosion by sapping occurs when ground water is enough to flow out of the stream embankment. Several geological features affect sapping at the West Valley site but conditions exist that produces significant sapping. An example of sapping erosion is from the large rainfall in August 2009 that produced a major landslide on the Buttermilk Creek embankment. This landslide moved the embankment fifteen feet closer to the plateau and the disposal trenches where nuclear wastes are stored.

Both of these erosion types are critical at the edge of the SDA, State Disposal Area, where trenches 35 feet wide and 20 feet deep are filled with wastes including nuclear radioactive materials. If one of the 14 trenches in the SDA is opened by erosion the stored material will be released to Franks Creek and flow downstream running right through the Seneca Nation into Lake Erie contaminating water supply for much of Western New York . Erosion is predicted to produce failures at the plateau edges in as little as decades and in the center of the plateau in centuries. This is an unacceptable risk because it will release nuclear materials into the watershed and produce radioactive contamination to many residents in Western New York. This risk can be reduced by exhumation of the waste in the trenches, removing them from site or store them in a stable fashion in containers that can be monitored and moved if necessary. The Phase I Erosion Study just released does not change this Scoping Comment because the released study has serious flaws and shortcomings. For example, individual events such as the August 2009 landslide and Seismic events are not included.

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