

CaVII: Please discuss the impact on DUSEL construction and/or operations in the event of a serious accident/incident in the train tunnel.

First, while plans for this contingency must be in place, the railroad's tunnel safety record is excellent. In the past three decades there has been one accident in the tunnel, a derailment without serious consequences (apart from the time it took to move the car back on track.)

The first issue in planning for such an event is that it not adversely affect the laboratory. This requires that the connections between tunnels – cross cuts with double fire door and interior refuges – be of a design that can withstand an intense fire. This includes fire intensity, duration, and maximum temperature. BNSF has already mentioned that it has sustained temperature standards that must be integrated into the design of the fire doors and refuges that DUSEL will install.

The second issue is the use of the DUSEL entrance tunnel for Cascade Tunnel rescue. DUSEL and BNSF would need to have a coordinated emergency plan, because each tunnel plays a reciprocal role in response to an emergency in the other. The creation of DUSEL would greatly enhance emergency response in the main tunnel. The cross cuts would provide refuge, and the DUSEL entrance tunnel would allow emergency personnel (BNSF, DUSEL, and outside fire and police) immediate access to parts of the main tunnel that would otherwise be difficult to reach. We envision that the coordinated emergency response protocols would be an important element of the ES&H plans that are formulated during the design phase. There are good examples of safety protocols for dual tunnel systems: because of recent tunnel fires, several European tunnels are being upgraded so that a parallel escape tunnel is available.

DUSEL-Cascades is designed so that the entrance tunnel and hallway are part of the laboratory's "dirty side." Clean laboratory rooms all have ducted ventilations, while exterior rooms can all default to ducted ventilation. So, apart from temporary inconvenience, there is no reason that use of the entrance tunnel and hallway for emergency response should compromise DUSEL operations. Again, we envision the design phase as the time all aspects of operations are carefully modeled, including all possible emergency responses. So the ideas presented here will be reconsidered and improved by engineers expert in safety protocols.