WHAT ABOUT A MAJOR EARTHQUAKE?

Given that there is a history of major earthquakes in the mountains around the Idaho National Laboratory and in the nearby Yellowstone region, a lot of people ask about the possibility of an earthquake damaging INL facilities and releasing hazardous materials. It is a concern the Department of Energy and our contractors take seriously. We have invested a lot of time and effort into investigating that possibility. We also make sure our facilities are built to standards that will protect them in the event of an earthquake.

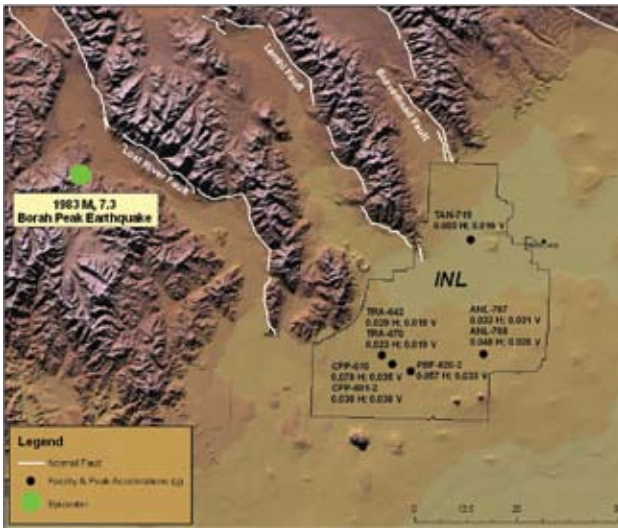
What our work and that of independent researchers has shown to date is that, while there is certainly a good deal of seismic activity in the regions north and south of the INL, the Snake River Plain, where our facilities are located, is much less active. Research has also shown that, because of the unique geologic structure of the Snake River Plain, it does not transmit the energy of earthquakes very well. That's good news, because it means that while there may be a very significant earthquake in the mountains north of the INL, much of the energy from that quake will be dampened before it reaches our facilities.

Even though seismic activity is near the INL, the facility is located in an area with less activity.

Here's a real world example of that: in 1983, the Borah Peak earthquake, which was centered about 58 miles northwest of the Advanced Test Reactor, registered 7.3 on the Richter Scale – a powerful quake by anybody's standards. Yet our seismic instruments located at the INL showed that the amount of energy registered at the Advanced Test Reactor from that quake was only about 2 percent of the force of gravity. That is well within the amount of energy the reactor is designed to withstand. When instruments located at the reactor detected that relatively small amount of energy from the earthquake, it automatically triggered the reactor to shut down.

For an independent look at the potential for earthquake activity on the Snake River Plain, we recommend you visit the United States Geological Survey's web site at: http://earthquake.usgs.gov/research/hazmaps/. You can also find seismic information for specific locations using latitude and longitude at: http://eqint.cr.usgs.gov/eq-men/html/lookup-2002-interp-06.html. Using this feature, you'll find that the estimated peak ground acceleration – essentially, how much energy will be delivered to a specific spot by an earthquake – at the Advanced Test Reactor is about 14.5 percent the force of gravity. The USGS estimates there is only a 2 percent chance of this acceleration being exceeded over the next 50 years. The reactor, and other key facilities at the INL, are built to withstand greater forces than this. (By comparison, the USGS estimates the peak ground acceleration in Jackson, Wyo. will be more than 46 percent of gravity during the same time frame).

The INL has a very extensive seismic monitoring network that it uses to gather data on earthquake activity on and around the site. The data generated by this network is factored in when the laboratory evaluates how safe its facilities, including nuclear facilities, would be in the event of an earthquake. We can't guarantee there will never be a significant earthquake in this region, but we can assure you that we've worked hard to anticipate what the impacts of that earthquake will be, and how we can best protect you, our employees and our facilities from those impacts.



During the 1983 Borah Peak Earthquake, the Advanced Test Reactor only experienced a ground motion of 0.023g, or about 2 percent of the force of gravity. The reactor safely and automatically shut down. The ATR is designed to withstand ground motion of 0.24g.