All are invited to attend the monthly meeting of the
Nittany Mineralogical Society
Wednesday, May 18, 2011 - Program at 8:00 p.m.
114 Earth & Engineering Sciences Building

Geological and Geophysical Aspects of Siting and Safety of Nuclear Power Plants

by
Shelton Alexander
Emeritus Professor of Geophysics
Geosciences Department, Penn State

Our May meeting will be held Wednesday the 18th in the room 114 auditorium of Earth & Engineering Sciences Building on the west side of the Penn State campus in State College, PA. Maps may be found on our web site.
6:30 to 7:30 p.m.: Social hour, refreshments in the lobby
Junior Rockhounds meeting in room 116
7:30 to 8:00 p.m.: announcements, questions, answers;
door prize drawings
about 8:00 p.m.: featured program
The event has free admission, free parking, and free refreshments, and is open to all – ***Bring your friends and learn more about this timely topic.*** *-Editor*

The role that geology and geophysics plays in the siting and safety of new nuclear power plants starts with site selection and initial design and continues through the licensing required to construct an approved facility. Issues addressed include the local and regional geology at the site, soil-structure interactions, hydrological conditions affecting the plant site, active faults in the region, past seismicity in the surrounding region and predicted annual probabilities of various levels of earthquake-generated ground motions. An approved plant must be designed to withstand earthquake ground motions that would be expected only once in several thousand years.

Examples of such geological and geophysical assessments for existing nuclear plants in eastern North America will be given. The recent relicensing of Penn State's Breazeale Nuclear Reactor on campus included reassessment of the geological and geophysical conditions affecting the site. Examples of these latest assessments that led to the successful relicensing of the reactor will be presented.

See our web site: www.nittanymineral.org