U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

RIC 2012

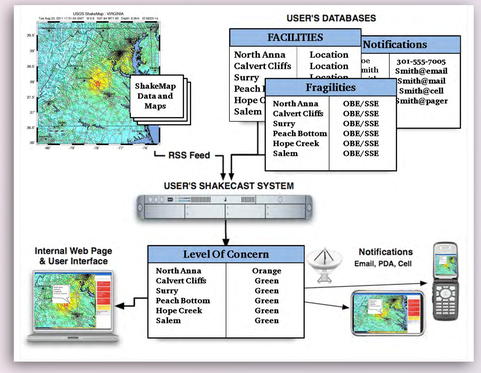
Office of Nuclear Regulatory Research

Nuclear ShakeCast

System Overview

Nuclear ShakeCast is a post-earthquake information tool developed by the U.S. Geological Survey (USGS) for the Nuclear Regulatory Commission (NRC) and the International Atomic Energy Agency (IAEA). Nuclear ShakeCast will provide the NRC with real-time situational awareness needed for informed decision making and effective communications following an earthquake occurring close to a nuclear facility.

USGS science for a changing world | IAEA | U.S.NRC United States Nuclear Regulatory Commission *Protecting People and the Environment*



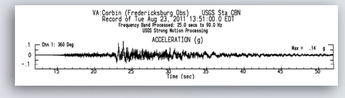
Nuclear ShakeCast automatically downloads an event ShakeMap from the USGS server, identifies any affected facilities and sends out notifications to key stakeholders via e-mail, PDA, or cell phone.

Earthquake Information Timeline

Ground Shaking Estimates

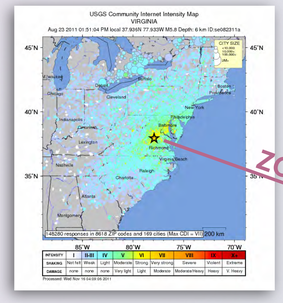
Nuclear ShakeCast provides both site-specific ground shaking estimates and facility-specific information. This information can be used to estimate the possible exceedence of regulatory thresholds like Operating Base Earthquake (OBE) and Safe Shutdown Earthquake (SSE).

Ground Motions

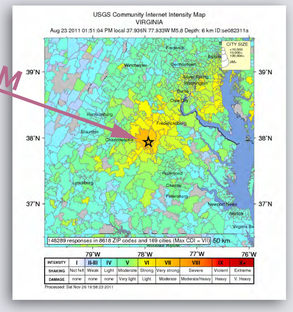


Ground motion estimates are calculated using information gathered from a nation-wide network of seismic instruments and from ground motion prediction equations (GMPE).

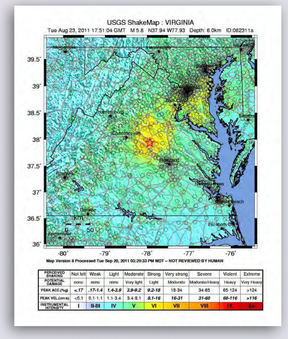
Did You Feel It?



Did You Feel It? maps are created using descriptions of shaking from the people who felt the earthquake



ShakeMap

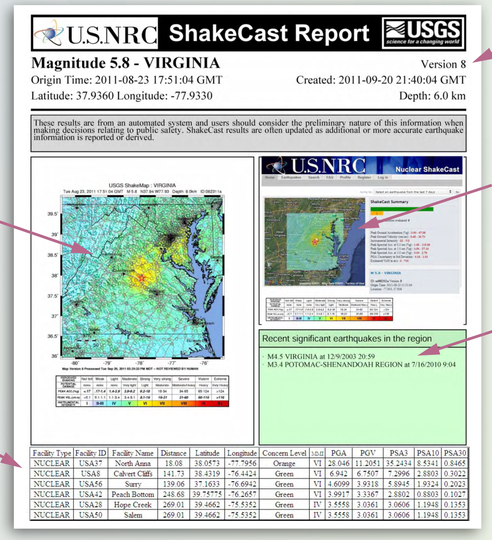


ShakeMaps display earthquake shaking parameters spatially and are developed using seismic network data, GMPE and data from Did You Feel It?

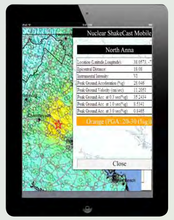
Reports

Nuclear ShakeCast Reports are disseminated via e-mails to key NRC stakeholders including Regional Inspectors, NRC Operations Center Officers, Agency Management, Seismic Specialists, Office of Public Affairs, etc. The reports can be customized with varying levels of detail based on the users' need. Updated reports are automatically generated as new ShakeMaps are published by the U.S. Geological Survey.

Email Bulletin



Mobile Interface



Display Console

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