**DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

**Public Hearing on Safety Management of Waste Storage and Processing in the Defense Nuclear Facilities Complex**

**Acronyms**

830 Code of Federal Regulations, Title 10 Part 830

3009 DOE Standard 3009

5506 DOE Standard 5506-2007

AIB DOE Accident Investigation Board

AK Acceptable Knowledge

AMWTP Advanced Mixed Waste Treatment Project

ARF Airborne Release Fraction

ARP Accelerated Retrieval Project

BOK Basis of Knowledge

CAP Corrective Action Plan

CBFO DOE Carlsbad Field Office

CCE Chemical Compatibility Evaluation

CCP Central Characterization Program

CH Contact-handled transuranic waste

CON Conclusion

Conops Conduct of operations

DNFSB Defense Nuclear Facilities Safety Board

DSA Documented Safety Analysis

EM DOE Office of Environmental Management

ESS Evaluation of the Safety of the Situation

Facrep DOE facility representative

GSTR Generator Site Technical Review

ICP Idaho Cleanup Project

INL Idaho National Laboratory

JON Judgment of Need

LANL Los Alamos National Laboratory

LFL Lower Flammability Limit

LLW Low level waste

NNSA National Nuclear Security Administration

OE Operating Experience

ORPS Occurrence Reporting and Processing System

RH Remote-handled transuranic waste

RF Respirable Fraction

RWMC Radioactive Waste Management Complex

SDA Subsurface Disposal Area

SRP Sludge Repacking Project

SRS Savannah River Site

TRU Transuranic waste

TSR Technical Safety Requirements

WAC Waste Acceptance Criteria

WIPP Waste Isolation Pilot Plant

**Glossary and Additional Information**

**Accelerated Retrieval Project:** A DOE project to remove certain wastes from the Idaho National Laboratory. The April 2018 event took place at a building called Accelerated Retrieval Project V. The Accelerated Retrieval Project buildings are above portions of the Subsurface Disposal Area, which contains buried wastes.

**Deflagration:** A combustion event where the flame front propagates at less than the speed of sound. Nuclear wastes often emit flammable gases and vapors, such as hydrogen, methane and xylene. If these fuels are present in sufficient concentrations, if there is sufficient oxygen or other oxidizer, and if there is an ignition source, a deflagration could occur. A deflagration can represent a type of explosion.

**Defense-in-Depth:** A fundamental approach to hazard control for nuclear facilities that is based on several layers of protection to prevent the release of radioactive or other hazardous materials to the environment. These protective layers are generally redundant and independent of each other to compensate for unavoidable human and mechanical failures so that no single layer, no matter how robust, is exclusively relied upon. [DOE Standard 3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*]

**Fluor Idaho, LLC:** A DOE contractor that performs cleanup work at the Idaho National Laboratory. Fluor Idaho, LLC, operates the Radioactive Waste Management Complex and the Advanced Mixed Waste Treatment Project.

**Generator Site Technical Review:** Reviews at DOE sites that generate transuranic waste. These reviews “will ensure that necessary and sufficient processes and procedures are in place and are implemented to assure TRU waste containers meet WIPP WAC requirements…” [DOE/CBFO 16-3563, *Waste Isolation Pilot Plant Generator Site Technical Review Plan*]. DOE initiated these reviews as a corrective action after the 2014 WIPP event.

**Operating Experience:** Information that relates to methods by which work is planned and conducted and an organization’s missions are performed. Operating experience provides the basis for knowledge and understanding that fosters development of lessons learned and improvement of operational experience. [DOE Order 210.2A, *DOE Corporate Operating Experience Program*]

**Radioactive Waste Management Complex:** The Accelerated Retrieval Project buildings are part of this larger facility. This facility also includes the Subsurface Disposal Area.

**Safety Basis:** The documented safety analysis and hazard controls that provide reasonable assurance that a DOE nuclear facility can be operated safely in a manner that adequately protects workers, the public, and the environment. [10 CFR 830, *Nuclear Safety Management*]

**Transuranic waste:** Material contaminated with transuranic elements – artificially made, radioactive elements, such as neptunium, plutonium, americium, and others – that have atomic numbers higher than uranium in the periodic table of elements. Transuranic waste is primarily produced from recycling spent fuel or using plutonium to fabricate nuclear weapons. [Glossary on the website of the U.S. Nuclear Regulatory Commission]

(formal definition) Waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years, except for…high-level radioactive waste… [for complete definition, see WIPP Land Withdrawal Act, as amended]