Appendix F: Acronyms and Glossary

ABC	accelerator-based converter
ACDA	Arms Control and Disarmament Agency
AEA	Atomic Energy Act
ALARA	as low as reasonably achievable
ALMR	advanced liquid metal reactor
ATSD(AE)	Assistant to the Secretary of Defense for Atomic Energy
CPAF	Cost-Plus Award Fee
DNA	Defense Nuclear Agency
DNFSB	Defense Nuclear Facilities Safety Board
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DP	DOE Office of Defense Programs
EA	Environmental Assessment
EH	DOE Office of Environment, Safety, and Health
EIS	Environmental Impact Statement
EM	DOE Office of Environmental Restoration and Waste Management
EMTD	DOE Executive Management Team for Dismantlement
EPA	U.S. Environmental Protection Agency
ERF	Energy Research Foundation
FAS	Federation of American Scientists
FOIA	Freedom of Information Act
fSU	former Soviet Union
GESMO	Generic Environmental Impact Statement on Mixed Oxide
HE	high explosive
HEU	highly enriched uranium
HTGR	high-temperature gas reactor
IAEA	International Atomic Energy Agency
ICBM	intercontinental ballistic missile
IFR	integral fast reactor
IHE	insensitive high explosive
INEL	Idaho National Engineering Laboratory
INF	Intermediate Range Nuclear Forces Treaty
JAC	Joint Advisory Committee on Nuclear Weapons Surety
KUMSC	Kirtland Underground Munitions Storage Complex
LANL	Los Alamos National Laboratory
LET	linear energy transfer
LEU	low-enriched uranium
LLNL	Lawrence Livermore National Laboratory
LWR	light-water reactor
M&H	Mason and Hanger-Silas Mason Co., Inc.
M&O	management and operations
MHTGR	modular HTGR
MINATOM	Russian Ministry of Atomic Energy
MIRV	multiple independently targetable reentry vehicle
MMES	Martin Marietta Energy Systems
MOX	mixed oxide
MPN	Military Production Network
NE	DOE Office of Nuclear Energy
NEPA	National Environmental Policy Act
NESSG	Nuclear Explosive Safety Study Group
NFS	Nuclear Fuel Services
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
NRC	U.S. Nuclear Regulatory Commission

NRDC	Natural Resources Defense Council
NS	DOE Office of Nuclear Safety
NWSP	Nuclear Weapons Stockpile Plan
OMB	Office of Management and Budget
ORE	Operational Readiness Evaluation
OREPA	Oak Ridge Environmental Peace Alliance
ORR	Operational Readiness Review
OSHA	Occupational Safety and Health Administration
OTA	Office of Technology Assessment
PANAL	Panhandle Area Neighbors and Landowners
PEIS	Programmatic Environmental Impact Statement
PEL	Permissible Exposure Limit
PPE	personal protective equipment
QED	Qualification Evaluation for Dismantlement Release
RADCON	Radiological Control Manual (DOE)
RCRA	Resource Conservation and Recovery Act
RFP	Rocky Flats Plant
SA	DOE Office of Security Affairs
SAC	steel arch construction
SAR	Safety Analysis Report
SLBM	submarine launched ballistic missile
SSD	Safe and Secure Dismantlement Interagency Steering Group
SST	Safe Secure Transport
STAND	Serious Texans Against Nuclear Dumping
STAR	State of Texas Alliance for Resources
START	Strategic Arms Reduction Treaty
STATS	National Academy of Sciences Panel on Separations Technology and Transmutation Systems
SWU	separative work unit
TSA	Technical Safety Appraisal
UCNI	Unclassified Controlled Nuclear Information
USEC	U.S. Enrichment Corporation

Actinides. Radioactive elements with atomic number larger than 88.

Alpha particle. Two neutrons and two protons bound as a single particle emitted from the nucleus of certain radioactive isotopes in the process of decay or disintegration.

Beta particle. A charged particle emitted from the nucleus of certain unstable atomic nuclei (radioactive elements), having the charge and mass of an electron.

Born classified. Term applied to Restricted Data, a category of information deemed "classified from its inception" under the Atomic Energy Act.

Complex 21. Designation for the Nuclear Weapons Complex when current plans for reorganization are realized, expected to occur around the turn of the century.

Criticality Pertaining to a critical mass (the least amount) of fissionable material that can achieve self-sustaining nuclear chain reactions.

Curie. A unit of radioactivity equal to that emitted by 1 gram of pure radium.

Demilitarization. The process of eliminating or reducing military weapons, materials, other hardware and organizational structures.

Deuterium. An isotope of hydrogen used in the fusion reaction of a nuclear weapon.

Disassembly. The process of taking apart a nuclear warhead and removing the subassemblies, components, and individual parts.

Dismantlement. The process of taking apart a nuclear warhead and removing the subassemplies, components, and individual parts.

Disposition. Determination of the long-term status of materials.

Formerly Restricted Data. Classified information, defined in the Atomic Energy Act, that is shared by DOE and DOD and is related to the military utilization of nuclear weapons or energy. Decisions to declassify such data must be agreed upon by both agencies.

Gamma radiation. Short-wavelength electromagnetic radiation of nuclear origin, similar to. but with higher energy than. x rays.

Gravel Gertie. Term used for explosion-resistant assembly/disassembly bays at the Pantex Plant where nuclear weapons are disassembled.

Half-life. Time required for one-half of the nuclei of a radioactive mass to decay.

High-level waste. Highly radioactive waste material from the reprocessing of spent nuclear fuel (including liquid waste produced directly in reprocessing and any solid waste derived from the liquid) that contains a combination of transuranic waste and fission products in concentrations requiring permanent isolation.

Highly enriched uranium. Uranium enriched in the isotopic content of uranium-235 to greater than 20 percent.

Ionizing radiation. Radiation that separates electrons from an atom or molecule.

Low-enriched uranium. Uranium enriched in the isotopic content of uranium-235, but to less than 20 percent of the total mass.

Low-level waste. Radioactive waste not classified as high-level waste, transuranic waste, spent nuclear fuel, or byproduct material.

National Security Information. Classified information that is not specifically governed by the Atomic Energy Act but by Executive order. The term is used in relation to DOE nuclear defense programs.

Plutonium. Man-made element produced when uranium is irradiated in a reactor. Plutonium-239 is the most suitable isotope for constructing nuclear weapons.

Plutonium pit. The core element of a nuclear weapon's "primary" or fission component. Pits are made of plutonium-239 and surrounded by some type of casing.

Rad. Radiation absorbed dose, a basic unit of absorbed dose of ionizing radiation representing an amount of energy absorbed per unit of absorbing material such as body tissue.

Radionuclide. Certain natural and man-made atomic species with unstable nuclei that can undergo spontaneous breakup or decay and, in the process, emit alpha, beta, or gamma radiation.

Rem (rad equivalent, man). Unit of dose equivalent. The dose equivalent in "rem" is numerically equal to the absorbed dose in "rad" multiplied by necessary modifying factors.

Restricted Data. Classified information defined by the Atomic Energy Act. Restricted Data are born classified, regardless of source.

Secondary. Component of a nuclear weapon that contains elements needed to initiate the fusion reaction in a thermonuclear explosion.

Special nuclear materials. As defined in the Atomic Energy Act, " 'special nuclear materials' means (1) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission . . . determines to be special nuclear material, but does not include source material. . .".

Tiger Team. Inspection teams that surveyed DOE Weapons Complex sites pursuant to a June 27, 1989, initiative. Tiger Team inspections gather information for the Secretary of Energy to assess environmental, safety, and health problems at the sites.

Transmutation. A process of converting one element to another by irradiating or bombarding it with radioactive particles.

Transparency. Exchange of information, access to facilities, and cooperative arrangements undertaken to provide ready observation and verification of defense or other activities.

Transuranic. Any element whose atomic number is higher than that of uranium. All transuranic elements are produced artificially and are radioactive.

Tritium. A radioactive gas, an isotope of hydrogen, that serves as a booster for the fusion reaction in the secondary component of a nuclear weapon.

Unclassified Controlled Nuclear Information. Information that is not classified but is judged to be sensitive with respect to DOE defense programs. Its dissemination is therefore controlled and limited. UCNI is a response to a requirement of the Atomic Energy Act.

Vitrification. Process of immobilizing radioactive material by encapsulating it into a glasslike solid.

Warhead. Explosive part of a nuclear weapons system. Warheads consist of nuclear materials, conventional high explosives, and related firing mechanisms.

Weapons retirement. The process by which nuclear weapons are determined to be obsolete or unnecessary for national defense. A retired weapon or weapon system is no longer in an active status or deliverable, but may still be a fully functioning nuclear device.