



## LAWRENCE LIVERMORE NATIONAL LABORATORY (LLNL): NUCLEAR DESIGN AND ENGINEERING AND HIGH EXPLOSIVE RESEARCH AND DEVELOPMENT (R&D)

### Complex Transformation – Preferred Alternative

NNSA is moving forward with a vision to achieve a smaller, safer, more secure, and less expensive enterprise that leverages the scientific and technical capabilities of our workforce, and meets national security requirements. The current Complex Transformation Supplemental Programmatic Environmental Impact Statement (SPEIS) effort is a major step in this process, and updates a Programmatic Environmental Impact Statement that is now more than a decade old. Our transformation strategy embraces the notion of modern “centers of excellence” by focusing on core competencies, eliminating redundancies, and maximizing the consolidation of special nuclear materials (SNM).

### LAWRENCE LIVERMORE NATIONAL LABORATORY (LIVERMORE, CALIFORNIA)

LLNL conducts research, design, and development of nuclear weapons; designs and tests advanced technology concepts; provides safety, security, and reliability assessments and certification of stockpile weapons; conducts plutonium and tritium research and development (R&D); hydrotesting; high-explosives (HE) R&D; and environmental testing. LLNL also currently maintains Category I/II quantities of SNM (special nuclear materials that require the highest level of security).

### MISSION HIGHLIGHTS

LLNL will be a *Center of Excellence for Nuclear Design and Engineering* as well as *Center of Excellence for High Explosive R&D*, and its mission will be enhanced by:

- Supercomputing platform host site;
- HE R&D with the High Explosive Applications Facility (HEAF) for formulation, processing, and confined testing (<10kg); and
- High-energy density physics with the National Ignition Facility (NIF) as a science magnet.

### TRANSFORMATIONAL CHANGES

The new, modern, efficient, and less expensive *Center of Excellence for Nuclear Design and Engineering* as well as *Center of Excellence for High Explosive R&D* will achieve over the next 10 years:

- Remove CAT I/II quantities of special nuclear material from the site by the end of 2012 and achieve down-grading of “Superblock” buildings 332 & 334;
- Reduce footprint of NNSA’s weapons account activities on Site 300;



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### TRANSFORMATIONAL CHANGES (Cont.)

- Reduce buildings and structures supported by NNSA's weapons account by 30%; and
- Over a decade or so, up to 20% fewer staff supporting nuclear weapons activities. These reductions are expected through natural attrition and transfer of personnel to other positions supporting essential national security needs.

The picture on the left shows the Lawrence Livermore National Laboratory. The graphic on the right shows Site 300, at which NNSA proposes to reduce footprint of weapons account activities by 2015.

