

areas because the design of the cart ensures that favorable geometry spacing is maintained.

EUO uses many types of approved containers: Y-12 Plant-approved containers including safe bottles and birdcages; U.S. Department of Transportation (DOT)-, DOE-, and NRC-approved off-site shipping containers; drums; sealed plastic bags of combustibles; and Y-12 Plant-approved dollies, such as safe bottle dollies, chip dollies, and salt bath liner dollies. In addition to approved containers for handling and transporting uranium materials, approved housekeeping equipment and sample carriers (transfers samples to the plant lab) are used in EUO processing areas.

Decontamination activities serve to reduce operation costs by allowing areas and equipment to be used again in EUO or other areas. Decontamination efforts also serve to reduce facility man-rem exposure, improve task performance schedules, and minimize waste production from EUO processes. Decontamination methods include sandblasting, grinding, acid baths, and general cleaning with soap and water.

### **Special Materials**

The mission of Special Materials is to salvage and recycle lithium including wet chemistry processes, metal production, powder production, parts production, machining, and storage for weapon production. Lithium hydride and deuteride are processed through a series of chemical operations to recover purified lithium in the form of lithium chloride powder. Lithium hydride and lithium deuteride components from retired weapons are sent to Building 9204-2 to be placed into material accountability and stored in one of two storage areas: Buildings 9201-5 and 9720-46. The stored materials are run through a series of chemical operations in Building 9204-2 to convert the lithium hydride and deuteride compounds into lithium chloride.

Special Materials facilities (Buildings 9204-2, 9720-46, 9201-5) contain a hydrogen generator, neutralization tanks, evaporators, calciners, reduction furnaces, conversion ovens, crusher grinders, gloveboxes, and presses. The material types handled in the facilities include nitrogen, chlorine, argon, hydrogen, deuterides, and lithium compounds. The materials are handled in the form of powder, gases, and metals.

### **Development Operations**

The mission of Development Operations is the advanced development, process development, and process support for the nuclear weapons complex. The goal is to accelerate the development and prototyping of advanced, cost-effective, and environmentally acceptable nuclear weapons production technologies and design processes required to maintain an affordable and reliable nuclear weapons stockpile. Functions of Development Operations include advanced development, process development, and process support for the nuclear weapons complex; plant assistance and troubleshooting for the Y-12 Plant; and various work-for-others projects.

Research and development includes a multitude of operations and experimental techniques such as processing of metals and ceramics, synthesis of organic compounds, microanalysis, robotics, computer software development, precision machining and measurement, and materials recovery.

3730 Gamma Irradiation Fac  
 3731 Graphite Machine Shop  
 3731A Graphite Machine Shop  
 3745 Radiological Sciences Lab  
 3745B Positive Ion Accelerator Lab  
 377 Geotechnical Engineering Lab  
 382 Pump House Building  
 382B Fire Pump Station  
 408A Main Heat Dump, East  
 408B Main Heat Dump, South  
 408C Main Heat Dump, West  
 409A Closed Loop Heat Dump, East #1  
 409B Closed Loop Heat Dump, East #2  
 427 Fuels & Material Exam. Fac  
 427A Argon/Hydrogen Mixing Building  
 4621E Auxiliary Equip. Bldg., East  
 4621W Auxiliary Equip. Bldg., West  
 616 Nonradioac Haz Chem Waste Fac  
 622A Elevator Control Bldg  
 622R Meteorology Lab  
 6266 Waste Sampling & Chrcrzn Fac  
 6266A Contaminated Liq. Waste Vault  
 6266B Vas Pump Building  
 6267 Env'L Sample Archive Facility  
 6290 Rigging Services Facility  
 6652C Space Science Facility  
 6652D Pumphouse  
 6652DOME2 Atmospheric Facility  
 6652E Lysimeter Preparation Bldg  
 6652H Ale Laboratory I  
 6652J Ale Laboratory II  
 6652LP Rattlesnake Mtn Lowr Pumphouse  
 6652M Fallout Laboratory  
 5541UP Upper Pumphouse  
 747A Whole Body Counter  
 MO-045 Body Count Lab  
 MO-426 Sample Rec/Prep Storg @ 1120n  
 MO-719 Calibration Laboratory @ 272w

*Y-12 National Security Complex*

9201-01 Manufacturing / Industrial  
 9201-01W Manufacturing / Industrial  
 9201-05 Manufacturing / Industrial  
 9201-05N Manufacturing / Industrial  
 9201-05W Manufacturing / Industrial  
 9202 Laboratory / Office  
 9203 Laboratory / Office  
 9203A Laboratory Development  
 9204-02 Manufacturing / Industrial  
 9204-02E Manufacturing / Industrial  
 9204-04 Manufacturing / Industrial  
 9205 Laboratory  
 9206 Processing / Industrial  
 9212 Processing / Industrial  
 9215 Manufacturing / Industrial  
 9217 Manufacturing / Industrial  
 9217-01 Manufacturing / Industrial

9401-03 Steam Plant  
 9404-11 Manufacturing / Industrial  
 9731 Manufacturing / Industrial  
 9737 Laboratory / Office  
 9769 Laboratory  
 9770-03 Laboratory / Storage  
 9980 Laboratory - Physical Testing  
 9981 Laboratory - Physical Testing  
 9995 Laboratory  
 9996 Manufacturing / Industrial  
 9998 Manufacturing / Industrial

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002 Advanced Materials Lab  
 002A Storage  
 004 ALS Support Facility  
 005 AFR  
 005A Storage Container  
 005B Storage Container  
 006 The ALS (Advanced Light Source)  
 007 ALS Support Facility  
 007A Storage  
 007C Offices  
 010 ALS Support Facility  
 010A Telecommunications Equipment  
 013A Environmental Monitoring Station  
 013B Environmental Monitoring Station  
 013C Environmental Monitoring Station  
 013D Environmental Monitoring Station  
 013E Environmental Monitoring Station  
 013F Environmental Monitoring Station  
 013G Environmental Monitoring Station  
 013H Environmental Monitoring Station  
 014 ES LAB  
 016 AFR LAB  
 016A Storage  
 017 EHS  
 017A Storage Container  
 017B Storage Container  
 025 ENG Shops  
 025A ENG Shops  
 025B Storage  
 026 Health Services, EH&S  
 027 ALS Support Facility  
 029 (vacant)  
 029A (vacant)  
 029B (vacant)  
 029C EE  
 029D (vacant)  
 030A Storage Container  
 030B Storage Container  
 030C Storage Container  
 030D Storage Container  
 030E Storage Container  
 030F Storage Container  
 030R Storage Container  
 030S Storage Container