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Five-Year NRHP Re-Evaluation of Historic Building Assessment

LLNL Main Site and Site 300

U.S. Department of Energy
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1.0 EXECUTIVE SUMMARY

The Lawrence Livermore National Laboratory (LLNL) "Draft Programmatic Agreement among the Department of Energy, the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer Regarding Operation of Lawrence Livermore National Laboratory" requires a review and re-evaluation of the eligibility of laboratory properties for the National Register of Historic Places (NRHP) every five years. The original evaluation was completed in 2005 and published in 2007; this report serves as the first five-year re-evaluation.

This re-evaluation includes consideration of changes within LLNL to management, to mission, and to the built environment. It also determines the status of those buildings, objects, and districts that were recommended as NRHP-eligible in the 2007 report and received concurrence from the Department of Energy (DOE)/National Nuclear Security Administration (NNSA) Livermore Site Office (LSO) and the California State Historic Preservation Officer (SHPO). Buildings that were omitted from the earlier building list, those that have reached 50 years of age since the original assessment, and new buildings are also addressed in the re-evaluation. This report finds that no buildings need to be added to the list of individual buildings eligible for the NRHP.

Final recommendations from this re-evaluation are:

- Building 810A should be added to the Site 300 Process Area and Chemistry Area Historic District;
- Buildings 810B and Building 810C should not be included in the Site 300 Process Area and Chemistry Area Historic District, due to their age and lack of contribution to the early decades of explosive processing operations;
- The eligible components of the Building 865 Complex include 865A and 865E;
- Building 332, which was determined by DOE/NNSA LSO in consultation with the California SHPO to be NRHP eligible, has been preserved via recordation, and should be allowed to evolve as needed to meet LLNL's scientific mission requirements; as it evolves it will likely lose integrity and not be considered NRHP-eligible any longer;
- Building 391, which was determined by DOE/NNSA LSO in consultation with the California SHPO to be NRHP eligible, has been preserved via recordation, has evolved significantly, and should no longer be considered NRHP-eligible for NOVA and the laser work that preceded it; and
- Non-Weapons Computing and Anti-Terror Research should be added to the list of themes within the Non-Weapons Research category of the Post-Cold War context.

- The 2015 five-year re-assessment should
    - re-evaluate the eligibility of the main site and Site 300 for the NRHP as historic districts,
    - consider any major breakthroughs and any historical recognition of past events or people,
    - address the current status of buildings and districts previously found NRHP eligible,
    - begin development of the post-Cold War context and provide a deeper understanding of relevant themes for LLNL within the post-1990 period, and
    - begin assessing post-1990 buildings for exceptional significance, as the youngest of them will be 25 years old.

2.0 INTRODUCTION

2.1 Purpose

In 2005, Michael Anne Sullivan and Rebecca Ann Ullrich completed a final draft of *Historic Context and Building Assessments for the Lawrence Livermore National Laboratory Built Environment* (2007)[1]. Lawrence Livermore National Laboratory (LLNL) and the U.S. Department of Energy/National Nuclear Security Administration Livermore Site Office (DOE/NNSA LSO) created a "Draft Programmatic Agreement Among the Department of Energy, the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer Regarding Operation of Lawrence Livermore National Laboratory" (Draft PA) that articulated the management of sites determined historic and the ongoing assessment activities required.[2]

The Draft PA requires a review and re-evaluation of the eligibility of laboratory properties for the National Register of Historic Places (NRHP) every five years in conjunction with NNSA's evaluation of its National Environmental Policy Act LLNL Site-Wide Environmental Impact Statement review. The original evaluation was completed in 2005; this report serves as the first five-year re-evaluation. Its purpose is to validate and provide any necessary corrections to or extensions of the 2007 report.

[1] Michael Anne Sullivan and Rebecca Ann Ullrich, *Historic Context and Building Assessments for the Lawrence Livermore National Laboratory Built Environment*, UCRL-TR-234717 (Livermore, California: Lawrence Livermore National Laboratory, 2007).
[2] Kelly Heidecker and Paul McGuff, "Draft Programmatic Agreement among the Department of Energy and the California State Historic Preservation Officer Regarding Operation of Lawrence Livermore National Laboratory" (Livermore, California: LLNL, June 2011).

2.2 Scope and Methodology

Addressing both the main site in Livermore and LLNL's Site 300 on Corral Hollow Road in the Tracy foothills, San Joaquin and Alameda counties, this re-evaluation involved a review of the 2007 report and determination of the current status of the properties it recommended as eligible for the NRHP. The building list from 2003 (when research began) used in the 2007 report was compared to the current building list and discrepancies addressed.

A site visit allowed for consideration of changes to the LLNL built environment, including modifications to older facilities and new construction. Properties not previously addressed were evaluated. Those facilities that turned 50 years old after 2003 were reviewed. Finally, research in the online LLNL news site *Newsline* and archival research produced further information regarding changes to mission programs within LLNL.

Michael Anthony, LLNL staff photographer, took additional digital photographs of new buildings, buildings with modifications, and those that were omitted from the 2007 report. Mr. Anthony took all photographs for this re-evaluation and those used as figures in this report.

3.0 CHANGES IN THE LABORATORY AND ITS BUILT ENVIRONMENT

3.1 Management

LLNL is a government-owned, contractor-operated (GOCO) entity. It is owned by the U.S. Department of Energy. The University of California managed it from its inception until 2007. In 2007, after 55 years, Lawrence Livermore National Security, LLC (LLNS), undertook the contract for management of LLNL.

The change in management has had no impact on the understanding of LLNL's earlier history. While the change will undoubtedly be understood as a turning point in LLNL's history, it is too early to assert a definitive change in direction. Certainly it is too early to determine any impact to the built environment.

3.2 Mission

Since the end of the Cold War, the overall mission emphasis and resulting internal organization of the laboratory has undergone several changes. Since 2005, LLNL has grouped the mission into three areas:

- Nuclear Security, which includes stockpile stewardship, nuclear non-proliferation work, and prevention of nuclear terrorism;
- International and Domestic Security, which includes counter terrorism and other threat reduction capabilities, as well as military technologies; and

- Energy and Environmental Security, which includes climate change studies and the pursuit of technologies to enable a carbon-free energy future.

All three are key elements of national security and in that sense LLNL's core contribution and role in U.S. security remain consistent. However, the mission of nuclear weapons design and development, primary during the Cold War, is now transformed into the Nuclear Security mission and the other two mission elements sit on an equal footing with it.

3.3 Current Emphases in Research Areas

Within its mission areas, LLNL pursues a broad range of research activities. Much of the research has its roots in Cold War nuclear weapons work, but is not pursued exclusively in support of nuclear weapons. LLNL's inertial confinement fusion research, for example, has always had a dual purpose—creating an environment for weapons design and component testing (now identified as part of stockpile stewardship) and pursuing sustainable energy production. Similarly, LLNL's work in biosciences originated as part of the nuclear effects studies arena, but has evolved into a broader defense research area.

The shifting emphasis within LLNL's research is reflected in its organizational structure. For example, in 1992, the Nonproliferation, Arms Control, and International Security (NAI) directorate was formed, absorbing the former Military Applications directorate. The title and purpose of NAI directly addressed nuclear weapon proliferation as a major threat to national security. In 2005, reflecting U.S. concerns and focus after 9/11, LLNL created a Homeland Security organization tied to NAI; they were subsequently subsumed into a Homeland and International Security Directorate, which in turn segued into the 2007 Global Security Directorate. Global Security included the ever-critical nonproliferation activities, as well as energy research, and intelligence analysis and technologies. The national security threats LLNL currently addresses are much broader than the nuclear weapons defense and nonproliferation missions that were its focus at the end of the Cold War.

Changes in LLNL's research profile are relevant to cultural resources management at the Lab in that they may have an impact on the built environment. The research is housed within LLNL's buildings, which may or may not reflect that research. The National Ignition Facility (NIF), computing, Homeland Security, and the biosciences have received significant attention and produced notable results within the past decade; the buildings that house them therefore may prove historically significant in the long term.

The discussion below is not meant to exclude any areas of research from potential historical significance. Rather, it is meant to highlight areas that currently appear likely to be judged historically significant in the future. The intent is to provide pointers for future areas of assessment.

3.3.1 National Ignition Facility

NIF is the world's largest and highest-energy laser. It is the newest, largest, and most promising of LLNL's lasers built to pursue inertial confinement fusion (ICF). ICF research at LLNL extends back into the 1950s. The 2007 report defined most of the big lasers and accelerators used to pursue ICF as historically significant, although most were no longer extant at LLNL at that time. NIF itself is part both of that historical line of research pursuing sustainable energy gain and of NNSA's stockpile stewardship program.

Spin-offs from NIF research may also prove significant. The Laser Inertial Fusion Engine (LIFE) concept emerged at LLNL from physics and technology that went into designing NIF. LIFE's goal is to create self-sustaining power plants using nuclear waste as a fuel. LIFE and other research and development activities that emerge from NIF need to be considered in future assessments of LLNL's built environment.

NIF and the buildings that house it remain too young to be considered eligible for the NRHP. However, it should be re-evaluated every five years until it achieves its primary goal, is removed from service, or approaches 50 years of age, to ensure the capture of its role in history. NIF has already made noteworthy breakthroughs in support of its experimental mission and the research areas that feed and parallel its development (laser research, crystal growth, optics studies) have flourished. As time passes and historic perspective is gained, these should also be re-evaluated to determine their historic significance within the LLNL post-Cold War context.

3.3.2 Computing

Computing at LLNL includes both infrastructure support and supercomputing. The former has not proven historically significant on its own—it is generally considered part of the overall operations of the site, along with infrastructure elements like utilities. The latter, however, ties LLNL to broader developments in computing, as both consumer and contributor.

While LLNL has always had cutting-edge computing at its disposal, the past two decades have seen a considerable expansion in the power, speed, and applications of computing in all areas of research. With the end of full-scale nuclear testing in 1992, modeling and simulation became ever more critical in nuclear weapon component design and stockpile maintenance. Breakthroughs in computing for simulation have, in turn, supported research in fields unrelated to nuclear weapons.

In 1995, President Clinton announced U.S. intention to pursue stockpile stewardship in the absence of nuclear testing. That same year, DOE instituted the Accelerated Strategic Computing Initiative (ASCI) to support the move from test-based to science- and simulation-based support of the Stockpile Stewardship Program (SSP), the purpose of

which is to "maintain high confidence in the safety and reliability of the nuclear weapons stockpile in the absence of nuclear testing."[3]

In terms of the built environment and assessment of NRHP eligibility, computing poses an interesting problem. The pace of this work is so fast that the machines are in and out of service in a matter of a few years and the buildings that house them are, for the most part, generic or representative of basic trends in commercial architecture. Without the machines, the buildings do not represent the accomplishments they once housed. As for the machines themselves, it is difficult to achieve enough perspective to reasonably judge their historical significance before they are removed from service. While breakthroughs are recognized and highly prized at the time they are made, they all do not stand out as necessarily historically significant over time. For example, computing speed records are honored within the international computing community, but with the exception of a few large barrier-crossing feats, previous speed achievements often seem minor in hindsight.

The nature of supercomputing drives frequent machine upgrades and replacements; often before any judicious assessment can be made of the work's significance and representation within the built environment. For example, IBM delivered the ASCI computer ASC Purple in 2005; the machine soon realized the program's intention to perform 100 teraflop/s (trillions of floating point operations per second). 100 teraflop/s was considered the threshold for successful and reliable 3-dimensional simulation of nuclear weapons performance required to ensure the safety and reliability of the U.S. nuclear stockpile without nuclear testing.

Purple was removed from service in 2010, having come and gone from LLNL between the original historic building assessment's completion and the beginning of the re-evaluation. At five years of age, its exceptional significance would be difficult to argue. Although Purple's achievements were clearly stated and well regarded, it is easy to envision the understanding of its importance shifting and readjusting as years pass and other achievements are compared to it and provide a broader perspective of its history.

3.3.3 Homeland Security

LLNL's work in emergency response and anti-terror studies pre-dates the country's post-9/11 definitions of these fields. The 2007 report found that this work was not represented in the LLNL built environment. As time goes on, that may change.

In response to the attacks of 9/11, the U.S. established a new entity, the Department of Homeland Security (DHS), and pushed for an additional focus on anti-terrorism and emergency response within the national security activities within other agencies. LLNL

[3] *ASCI Software Quality Engineering: Goals, Principles, and Guidelines*, DOE/DP/ASC-SQE-2000-FDRFT-VERS2, (Washington, D.C.: U.S. Department of Energy, 2001).

introduced a Homeland Security Organization in 2005 and maintains ties with the DHS. LLNL's existing research in secure data processing, improved screening technologies, anti-terrorism, analysis and threat reduction, and several other areas were pulled together to support the post-9/11 security emphasis.

It is not altogether clear whether this research will coalesce into historically significant breakthroughs as part of a homeland security theme. If this research emphasis is sustained, however, any impact it might have on the LLNL built environment must be evaluated. At this point, the work is not apparent in the built environment and no buildings can be judged historically significant due to their associations with it.

3.3.4 Biosciences

LLNL's biosciences research history extends back into the early 1960s, when a biomedical research program started. That research focused on the biological effects of fallout from nuclear detonations. Ultimately, a biomedical division was established. The 2007 report, while deeming the work interesting, did not find it represented in the LLNL built environment.

More recent developments in the biosciences may prove interesting to historians in the long-term. Currently, the Center for Accelerator Mass Spectrometry (CAMS) is garnering attention from scientists internationally. Dating from the late 1980s, CAMS is a post-Cold War capability within LLNL. LLNL researchers pursue biological studies using accelerator mass spectrometry (AMS), which measures concentrations of isotopes in small samples. In addition to studying the effects of carcinogens on humans and animals, researchers conduct radiocarbon dating for internal research and external customers. LLNL is not the only institution using AMS, but it is the only site in the U.S. that focuses on AMS for biological research. CAMS is still too young to be considered NRHP-eligible. Later re-evaluations may find the properties that house AMS research historically significant.

4.0 REVIEW OF THEMES

4.1 Local History and World War II

In addition to the dominant nuclear weapons themes that appear in LLNL's history, the site sits within the broader Livermore context and has a history that extends back into World War II (WWII). Thus, the 2007 report asserted themes for Local History and WWII History, as follows:

Local History

- Ranching
- Viticulture

- Early Industrial Development

WWII History

- Naval pilot training
- Naval Air Station (NAS) support of the U.S. war effort

The 2007 report recommended that nothing at LLNL be considered NRHP eligible within these themes, primarily due to the complete difference in missions between LLNL and the surrounding community and the lack of integrity in the structures from WWII.

4.2 Cold War

The 2007 report focused primarily on LLNL in the Cold War period and established a full set of themes for the Cold War context, as follows.

Cold War History

- Nuclear Weapons Design
  - Weapons Design
  - Computing
- Nuclear Weapons Testing
  - Nuclear Testing
  - High Explosives Testing
- Nuclear Research
  - Nuclear Physics Research
  - Nuclear Chemistry Research
  - Nuclear Materials Research
- Non-weapons Research
  - Nuclear Energy Research
  - Nuclear Propulsion Research
  - Plowshare
  - Biomedical Research

These themes remain relevant and adequate. The understanding of LLNL's role in Cold War and its significance remain intact. The manner in which the themes are reflected in the built environment has similarly not changed.

4.2 Post-Cold War

The 2007 report established basic themes for the post-Cold War period, as follows.

- Nuclear Weapons Design
  - Computing

- Nuclear Weapons Testing
    - High Explosives Testing
- Nuclear Research
    - Nuclear Physics Research
    - Nuclear Chemistry Research
    - Nuclear Materials Research
- Non-weapons Research
    - Nuclear Energy Research
    - Nuclear Propulsion Research
    - Biomedical research

These are expected to change or at least expand as time passes and the post-Cold War period is better understood. At this point, given the growth of various areas of research within LLNL since the Cold War's end, both Non-weapons Computing and Anti-Terror Research should be added to the list of themes within the Non-weapons Research category.

Undoubtedly, the understanding of LLNL's role in this period will keep evolving. The post-Cold War period will most likely be reconceived as time passes and defined less in juxtaposition to the Cold War and more as a context or set of historic contexts on its own. The name was originally acknowledging that the Cold War was a definable, recognizable period in history. LLNL had no other clear identity in the decade immediately following the end of the Cold War; however, as time passes, there may be a clearly identifiable transition period that would still be called the post-Cold War period. That period would presumably end and a new era in LLNL's history begin (or its association with a new period of history would be established). Alternatively, it may be that a new period is ultimately identified as beginning at the end of the Cold War—and the notion of a post-Cold War period would drop away. Determining that will take greater historic perspective than is currently available.

The 2015 re-evaluation should consider this period again. By 2020, clearer delineations of the time period will be established by historians, allowing for definite themes within which buildings from this era can be assessed.

5.0 REVIEW OF BUILT ENVIRONMENT

5.1 Current List of Properties

The list of LLNL properties from November 22, 2011, includes 684 items, with 465 at the main site, 5 offsite, and 214 at Site 300. This includes permanent buildings, as well as temporary buildings, mobile structures, trailers, utilities, landscaping, storage tanks, fences, security elements, and all other elements of the LLNL built environment. The list is provided in **Appendix I**.

5.2 No Further Evaluation Needed

The re-evaluation eliminated properties that did not require further evaluation from the current building list as they will not be considered of historic interest unless associated with a historic person or part of a historic district based on the eligibility of a related structure housing technical activities. These included the following types of properties:

- Structures built and used solely for storage;
- Shops or support structures;
- Office buildings and administrative support buildings;
- All buildings from 1990 forward, unless they are threatened *and* have housed technical programmatic activities;
- All trailers, mobile, or temporary buildings;
- All explosive vaults or bunkers (like the other support structures, these will be included in the district consideration of any potentially interesting structure with which they are associated);
- All utilities;
- All security posts and guard stations;
- All landscaping, fencing, roads, parking, sidewalks, lighting, electrical systems (including lines, generators, and transformers), gas systems, communication systems, sewers, retaining walls, storage tanks, and other supportive infrastructure elements, as none of these appear to be of interesting designs or uses within the LLNL environment;
- Any offsite buildings used by LLNL, but not owned by DOE; and
- Any structure that does not fit within the historic preservation themes established for the site.

In addition, all buildings previously consulted on and determined by LSO to be of no historic significance were excluded, with the exception of those that reached 50 years of age since the last evaluation; Building 111, Directors Office, which will be discussed below in consideration of the individuals associated with the building; and Buildings 112 and 262 and the Building 810 Complex (Buildings 810A, 810B, and 810C), which were inadvertently omitted from the building list used for the 2007 report. These will all be addressed below.

The resulting list of properties for re-evaluation is much reduced, as indicated in **Table 1**, which includes 74 buildings. The majority are those that have turned 50 since the 2007 report was completed; they will be addressed in Section 5.3, below. The remainder are those proposed eligible in 2005, the status of which are detailed in Section 5.4, and those requiring reconsideration because they were either omitted from the building list used in

the 2007 report or otherwise require further discussion. These are discussed in Section 5.5, which will also provide some detail on new construction and architectural design.

Table 1: Properties Included in 2010 Re-Evaluation

Site	Asset ID	Facility Name	Facility Age
MAIN SITE	111	DIRECTORS OFFICE	42
MAIN SITE	112	COMPUTER CENTER	45
MAIN SITE	115	COMPUTATION FACILITY BLDG	57
MAIN SITE	116	G.S	53
MAIN SITE	117	COMPUTATION FACILITY BLDG	58
MAIN SITE	121	PLS OFFICE	56
MAIN SITE	123	AUDITORIUM	53
MAIN SITE	125	WEST CAFETERIA	52
MAIN SITE	131	ENGINEERING	52
MAIN SITE	162	RESEARCH/CRYSTAL GTH	51
MAIN SITE	165	OPTICS/DEVELOPMENT LAB	53
MAIN SITE	166	DEVELOPMENT LAB	51
MAIN SITE	**174**	**PLS**	**54**
MAIN SITE	194	PLS	53
MAIN SITE	233	MATERIALS MANAGEMENT	51
MAIN SITE	**241**	**VACANT**	**51**
MAIN SITE	243	VACANT	52
MAIN SITE	251	VACANT	55
MAIN SITE	253	HC DEPT OFFICES & LABS	52
MAIN SITE	254	HC BIO ASSAY LAB	51
MAIN SITE	261	VACANT	57
MAIN SITE	262	G.S	53
MAIN SITE	280	VACANT	55
MAIN SITE	**281**	**LABORATORY**	**55**
MAIN SITE	312	IMF MANAGED FACILITY	55
MAIN SITE	327	RADIOGRAPHY	52
MAIN SITE	331	TRITIUM FACILITY	52
MAIN SITE	**332**	**PU FACILITY**	**51**
MAIN SITE	343	IMF MANAGED OFFICE/LAB FACILITY	51
MAIN SITE	**391**	**DEVELOPMENT LABS**	**33**
MAIN SITE	431	BEAM RESEARCH CENTER	58
MAIN SITE	435	VACANT	51
MAIN SITE	436	PLS SHIPPING/RECEIVING/STORAGE	55
MAIN SITE	446	VACANT	51

Site	Asset ID	Facility Name	Facility Age
MAIN SITE	U119	TELCOM NODE #11	69
SITE 300	804	STAGING AREA	53
SITE 300	**805**	**INERT MACHNG/EXPLVS WST PACKNG**	**54**
SITE 300	**806A**	**HE MACHINING**	**54**
SITE 300	**806B**	**HE MACHINING**	**54**
SITE 300	**807**	**HE MACHINING**	**50**
SITE 300	809A	HE PRESSING	52
SITE 300	810A	HE ASSEMBLY	39
SITE 300	810B	HE ASSEMBLY	29
SITE 300	810C	ASSEMBLY STORAGE	29
SITE 300	811	VACANT	52
SITE 300	812A	VACANT	51
SITE 300	813	CHANGE HOUSE	54
SITE 300	**817A**	**HE PRESSING CONTROL ROOM**	**54**
SITE 300	**817B**	**HE PRESSING CELL**	**54**
SITE 300	817D	HE PRESSING STORAGE	54
SITE 300	**817F**	**HE PRESSING OVENS**	**54**
SITE 300	817G	HE PRESSING BOILERS	54
SITE 300	817H	HE PRESSING INERT STORAGE	54
SITE 300	**825**	**CHEM PROCESS FACILITY**	**52**
SITE 300	**826**	**CHEM PROCESS FACILITY**	**50**
SITE 300	**827A**	**CHEMISTRY BLDG**	**43**
SITE 300	**827C**	**CHEM PROCESS FACILITY**	**43**
SITE 300	830	VACANT	54
SITE 300	832A	STORAGE	54
SITE 300	832C	STORAGE	54
SITE 300	833	EPD/ERD SERVICE-R&D	52
SITE 300	8340	EPD/ERD SRVC-MNTRNG TF834	50
SITE 300	834A	THERMAL TEST FACILITY	51
SITE 300	834B	VACANT	51
SITE 300	834C	VACANT	51
SITE 300	834D	VACANT	51
SITE 300	834E	VACANT	51
SITE 300	834F	VACANT	51
SITE 300	834G	VACANT	51
SITE 300	834H	THERMAL TEST FACILITY	51
SITE 300	**850**	**VACANT**	**51**
SITE 300	**851A**	**FIRING FACILITY**	**51**
SITE 300	**865**	**VACANT**	**29**

Site	Asset ID	Facility Name	Facility Age
SITE 300	895	EPD/ORAD OFFICE	51

Note: Buildings that the 2007 report recommended as NRHP-eligible or part of a district are indicated in bold text.

5.3 Technical Facilities Reaching 50 since 2005 Review

Criteria Consideration G of the Secretary of the Interior's guidelines for assessing historic properties requires that properties must be over 50 years old to be considered eligible for the NRHP, unless they are of exceptional significance. This means that the threshold for eligibility essentially drops from exceptional historic significance to historically significant for older properties. LLNL's building list indicates that 141 buildings or structures reached 50 years of age since the 2007 report was completed. **Appendix II** provides a list of all of them.

Most of the properties listed in **Appendix II** are infrastructure or other support structures that require no further evaluation at this time. **Table 2** provides a list of those technical facilities and offices for technical programs that have turned 50 since 2005. Those previously recommended eligible or part of a historic district are in bold and will be addressed in Section 5.4, below.

Table 2. LLNL Technical Facilities Reaching 50 since 2007 Report

Site	Asset ID	Facility Name	Facility Age
MAIN SITE	116	G.S	53
MAIN SITE	123	AUDITORIUM	53
MAIN SITE	131	ENGINEERING	52
MAIN SITE	162	RESEARCH/CRYSTAL GTH	51
MAIN SITE	165	OPTICS/DEVELOPMENT LAB	53
MAIN SITE	166	DEVELOPMENT LAB	51
MAIN SITE	**174**	**PLS**	**54**
MAIN SITE	194	PLS	53
MAIN SITE	**241**	**VACANT**	**51**
MAIN SITE	243	VACANT	52
MAIN SITE	251	VACANT	55
MAIN SITE	253	HC DEPT OFFICES & LABS	52
MAIN SITE	254	HC BIO ASSAY LAB	51
MAIN SITE	262	G.S	53
MAIN SITE	327	RADIOGRAPHY	52

Site	Asset ID	Facility Name	Facility Age
MAIN SITE	331	TRITIUM FACILITY	52
MAIN SITE	**332**	**PU FACILITY**	**51**
MAIN SITE	343	IMF MANAGED OFFICE/LAB FACILITY	51
MAIN SITE	435	VACANT	51
MAIN SITE	436	PLS SHIPPING/RECEIVING/STORAGE	55
MAIN SITE	446	VACANT	51
MAIN SITE	U119	TELCOM NODE #11	69
SITE 300	804	STAGING AREA	53
SITE 300	**805**	**INERT MACHNG/EXPLVS WST PACKNG**	**54**
SITE 300	**806A**	**HE MACHINING**	**54**
SITE 300	**806B**	**HE MACHINING**	**54**
SITE 300	**807**	**HE MACHINING**	**51**
SITE 300	809A	HE PRESSING	52
SITE 300	811	VACANT	52
SITE 300	812A	VACANT	51
SITE 300	813	CHANGE HOUSE	54
SITE 300	**817A**	**HE PRESSING CONTROL ROOM**	**54**
SITE 300	**817B**	**HE PRESSING CELL**	**54**
SITE 300	817D	HE PRESSING STORAGE	54
SITE 300	**817F**	**HE PRESSING OVENS**	**54**
SITE 300	817G	HE PRESSING BOILERS	54
SITE 300	817H	HE PRESSING INERT STORAGE	54
SITE 300	**825**	**CHEM PROCESS FACILITY**	**52**
SITE 300	830	VACANT	54
SITE 300	833	EPD/ERD SERVICE-R&D	52
SITE 300	8340	EPD/ERD SRVC-MNTRNG TF834	50
SITE 300	834A	THERMAL TEST FACILITY	51
SITE 300	834B	VACANT	51
SITE 300	834C	VACANT	51
SITE 300	834D	VACANT	51
SITE 300	834E	VACANT	51
SITE 300	834F	VACANT	51
SITE 300	834G	VACANT	51
SITE 300	834H	THERMAL TEST FACILITY	51
SITE 300	**850**	**VACANT**	**51**
SITE 300	**851A**	**FIRING FACILITY**	**51**
SITE 300	895	EPD/ORAD OFFICE	51

Structure U-119, telecommunications node #11, although an infrastructure-support facility, is included on the list because it was not specifically addressed in the 2007 report. U-119 was built as part of the WWII NAS facilities at the site. It has retained the same function throughout its history. As illustrated in **Figures 1** and **2**, it is a small underground structure, accessed via concrete stairs. It is unremarkable except for its age (69 years). Its age alone does not lend it historic significance, however. As an infrastructure support facility that does not use any breakthrough technologies, it is not of historic interest on its own; as the rest of the WWII structures were found to lack integrity for their period of significance, there is no historic district to which it contributes. The recommendation is that U-119 is not NRHP-eligible.

Figure 1. Entrance site to U-119, telecommunications facility, 2010

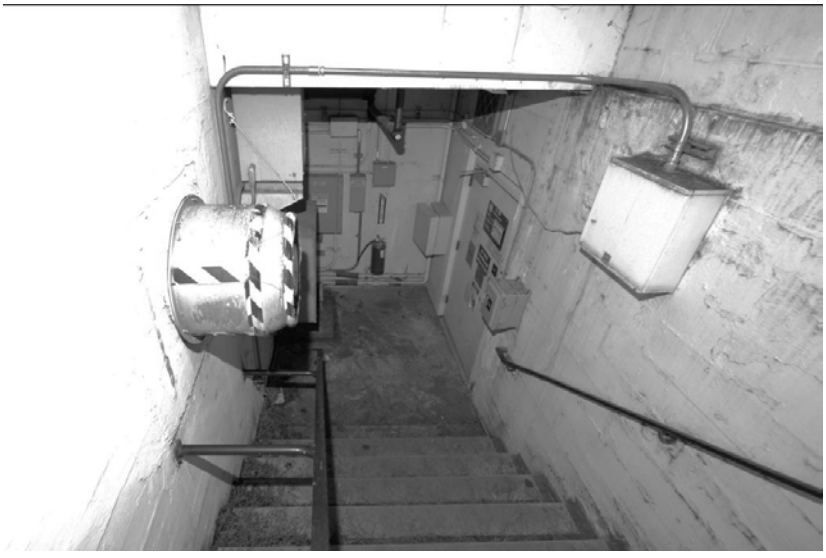

Figure 2. Concrete steps and steel door leading to U-119, 2010

The technical buildings that have turned 50 were originally assessed in consideration of their contributions to LLNL's Cold War work. Some were found to be historically significant, but lacking in integrity for their period of significance (Buildings 162, 166, 241, 243, 251, 331, 435, 809A). This conclusion is not changed by the buildings' ages. They no longer represent the original, historic work they housed.

The previous assessment did not identify anything that was historically significant but not of exceptional significance. A review of these buildings during the re-evaluation included consideration of the work they housed. No buildings that turned 50 since 2005 appear to meet the eligibility criteria for the NRHP that were not already eligible. The recommendation is that no buildings that have recently turned 50 be added to the NRHP-eligible list for LLNL.

5.4 Status of Existing NRHP-Eligible Properties

The previous report recommended that five individual buildings, two sets of objects, and two historic districts be found eligible for the NRHP, as listed in **Table 3**.

Table 3. Properties Recommended for NRHP Eligibility in 2007 Report

Building, Object, or District	Names of Properties Included	Date Built
Building 194	100-MeV Electron-Positron Linear Accelerator Facility	1958
Building 280	Livermore Pool-Type Reactor	1958
Building 332	Plutonium Facility	1961
Building 391	Nova Facility	1976
Building 865A	Advanced Test Accelerator	1980
Selected Objects in Building 174	Janus laser and control panel	1974
Selected Objects in Building 241	Brew furnaces in Room 1600 of Building 241	1960
Site 300 Process Area and Chemistry Area Historic	Process Area and Chemistry Area: Buildings 805, 806A, 806B, 807, 817A,	1957

Building, Object, or District	Names of Properties Included	Date Built
District	817B, 817F, 825, 826, 827A, 827C	
Site 300 Hydrodynamic Test Facilities Historic District	Hydrodynamic Test Facilities Area: Buildings 850 and 851A	1955

Review of the NRHP eligibility status and current work in the structures listed in **Table 3** indicates that most are still eligible. The current status of the properties and the recommendations for their NRHP eligibility are summarized in **Table 4** and detailed in Sections 5.4.1 and 5.4.2, below.

Table 4. Current Status of Properties Considered NRHP-Eligible in 2007 Report

Building or District	Description	Current Status	NRHP Eligibility
Building 194	100-MeV Electron-Positron Linear Accelerator Facility	Preservation via documentation is underway.	NRHP Eligible
Building 280	Livermore Pool-Type Reactor	Reactor and building are inactive. No change since original assessment.	NRHP Eligible
Building 332	Plutonium Facility	Preservation via documentation is complete.	NRHP Eligible
Building 391	Nova Facility	Preservation via documentation is complete.	No longer NRHP Eligible
Building 865A	Advanced Test Accelerator: Buildings 865A	Preservation via documentation is underway. Clarified discussion of buildings in complex and added 865E as eligible.	NRHP Eligible
Building 174 Objects	Janus laser and control panel	No change since original assessment.	NRHP Eligible
Building 241 Objects	Brew furnaces in Room 1600 of Building 241	LSO consultation with CA SHPO led to determination of not historic.	Not NRHP eligible
Site 300 Process Area and Chemistry Area Historic District	Process Area and Chemistry Area: Buildings 805, 806A, 806B, 807, 810A, 817A, 817B, 817F, 825, 826, 827A, 827C	Remains in active use. Added Building 810A to district elements.	NRHP eligible

Building or District	Description	Current Status	NRHP Eligibility
Site 300 Hydrodynamic Test Facilities Historic District	Hydrodynamic Test Facilities Area: Buildings 850 and 851A	850 is now inactive; 851A remains in active use	NRHP eligible

5.4.1 No Longer Eligible

Building 241 objects (Brew Furnaces): In 2004, LSO consulted with the California State Historic Preservation Officer (SHPO) regarding a recommendation that the brew furnaces be considered NRHP eligible. The California SHPO disagreed, pointing out that the brew furnaces were the last pieces of what had been a large, complex set of equipment and, as such, did not sufficiently represent Project Rover. On the basis of this input, LSO determined that the brew furnaces are not NRHP-eligible and should no longer be considered historic.[4] The brew furnaces have been removed.

Building 391 (Nova Facility): Building 391 was preserved via recordation, including large-format photographs and a written report capturing the building's history and architectural features.[5] The building remains part of LLNL's significant laser research and pursuit of nuclear fission as a support structure to NIF. As such, it has continued to evolve, housing new activities and new research machines. These changes are significant, transforming the building's interior sufficiently to undercut its integrity for its period of significance. In the future, it may again be part of historic events and be assessed as historically significant. At this time, however, it should not be considered NRHP-eligible.

5.4.2 Still Eligible

Building 174 (Janus laser and control panel): The Janus laser remains intact in Building 174. As laser research is a constantly evolving practice and the machines in use undergo frequent alterations, Janus is expected to lose integrity over time. LLNL anticipates preserving Building 174 and Janus via recordation. Once that has happened, Janus and Building 174 will continue to evolve, ultimately losing integrity for their established period of significance.

[4] Milford Wayne Donaldson, State Historic Preservation Officer, California Office of Historic Preservation, to Karin L. King, Acting Deputy Director, Environmental Stewardship Division, National Nuclear Security Administration, Livermore Site Office, May 21, 2004; Carol Kielusiak to Brad Thomson, e-mail correspondence, August 9, 2004; and Milford Wayne Donaldson, California State Historic Preservation Officer, California Office of Historic Preservation, Letter of Concurrence, to Karin L. King, Acting Deputy Director, Environmental Stewardship Division, National Nuclear Security Administration, Livermore Site Office, April 5, 2005.

[5] Michael Anne Sullivan and Rebecca Ann Ullrich, "Lawrence Livermore National Laboratory, NOVA Building (Building 391): Written Historical and Descriptive Data, [and] Photographs" (Livermore: Lawrence Livermore National Laboratory, 2006).

Building 194 (100 MeV Electron-Positron Linear Accelerator Facility): Building 194 is an active accelerator facility. As with laser research, accelerator research is an active field, requiring frequent alterations to machines and experiments. LLNL's plans include accelerators of very different design and capability than the 100 MeV Electron-Positron Linear Accelerator. As a result, preservation via recordation of the building and the 100 MeV is underway. Large-format photography is complete and a draft report outlining the building's history and architectural features is underway. The building and the machines it houses will continue to evolve, eventually losing integrity for their period of significance.

Building 280 (Livermore Pool-Type Reactor): The Livermore Pool-Type Reactor (LPTR) has not been used in research in decades. Building 280 is vacant, housing just the inactive reactor and its support equipment. LLNL expects to preserve Building 280 and the LPTR via recordation. Once preservation is complete, the building and the LPTR will be available to demolished.

Building 332 (Plutonium Facility): LLNL's Plutonium Facility remains intact, housing functions similar to and an extension of those conducted during its period of significance. The building and its operations were preserved via recordation with large-format photography and a written report of its history and architectural features.[6] LLNL expects the building to remain in active use; it will be allowed to evolve as needed to support mission requirements. Ultimately, it may lose integrity for its period of significance and become ineligible for the NRHP.

Site 300: Building 865A (Advanced Test Accelerator [ATA]): Originally, the 865 Complex included Buildings 865A and seven support structures, Buildings 865B, C, D, E, F, G, and H. Based on a misunderstanding of a site sketch, the 2007 report incorrectly indicated that Building 865E had been demolished at an earlier date and only Buildings 865A, B, C, D, F, G, and H remained standing.

A site visit and review of the building drawings in 2010 clarified the Building 865 Complex layout. Buildings 865A and 865E are connected by the narrow 865B, forming a long central structure that forms the bulk of the complex. Buildings 865D, G, and H are small support buildings of little significance; they sit to the west of the long 865A, B, E structure. Buildings 865C and F are no longer extant. A current view of the 865 Complex is shown as **Figure 3**.

[6]Michael Anne Sullivan and Rebecca Ann Ullrich, "Lawrence Livermore National Laboratory, Plutonium Facility (Building 332): Written Historical and Descriptive Data, [and] Photographs" (Livermore: Lawrence Livermore National Laboratory, 2008.)

Most of the components of the ATA were removed from the experimental tunnel and the 2nd floor power conditioning area prior to the 2007 report: the final 10 cell blocks were removed in 2008 at which time the cells were demolished during the extraction of the ferrite cores for reuse in another LLNL project; some of the power conditioning equipment (e.g. blumleins and other components) from the second floor power conditioning area were removed in 2009 and sent to Lawrence Berkeley National Laboratory (LBNL); and additional blumleins and equipment were removed in 2011 and also sent to LBNL. Buildings 865A and E continue to retain integrity, however, and reflect the accelerator research they once housed. The current recommendation is that Building 865A and E remain NRHP eligible. LLNL is preserving Buildings 865A and E via recordation.

Figure 3. Building 865 Complex, 2010

Site 300: Process Area District (Buildings 805, 806A, 806B, 807, 817A, 817B, 817F, 825, 826, 827A, 827C): The Process Area and Chemistry Area remains in active use at LLNL's Site 300. The Building 817 Complex (Buildings 817A, B, and F) portion of the district was preserved via recordation, including large-format photography and a written report describing the history and architectural features of the buildings.[7]

[7]Thomas Kato, Lawrence Livermore National Laboratory to Karin King, Department of Energy, National Nuclear Security Administration, Livermore Site Office, January 14, 2005.

[8]Michael Anne Sullivan and Rebecca Ullrich, "Lawrence Livermore National Laboratory, Site 300 Process Area and Chemistry Area, High Explosive Pressing Complex (Buildings 817A, B, and F)" (Livermore, California: Lawrence Livermore National Laboratory, 2006).

The Building 817 Complex was recorded preparatory to the move of high explosives (HE) pressing activities to the refurbished Building 809 Complex. LSO previously determined that the buildings at the 809 complex were not eligible and not part of the Process Area and Chemistry Area Historic District. Building 809A was remodeled and a refurbished HE press installed. A new Building 809B was constructed at the site. Building 809C was refurbished and new ovens were installed. The boiler for the refurbished press did not work; the new ovens also did not work and were removed to storage. Buildings 817A, B, and F remain in service.

The 2007 report omitted the Building 810 Complex from its evaluation of the process area. The complex was assessed as part of this re-evaluation and is included as Appendix III. It is recommended that Building 810A be added to the Process Area and Chemistry Area Historic District, as it has been a key element in the overall HE processing activities at Site 300 from the Process Area's inception.

Site 300: Hydrodynamic Test Facilities Historic District (Buildings 850 and 851A): The two properties included in the Hydrodynamic Test Facilities Historic District remain intact. Building 850 is currently inactive, housing no research or testing activities. Anticipating the ultimate preservation of the historic district via recordation, large-format photographs were taken of Building 850 prior to closing it down. LLNL also cleaned and contoured the landscape around Building 850 as part of the environmental clean-up at the site. The bowl of hillside around the building currently presents a raw, terraced appearance, as illustrated in **Figure 4**; native grasses will cover the soil as time passes. The landscaping does not undercut the building's appearance or historic integrity and the district remains intact.

Figure 4. Landscaping of hillside and immediate area around Building 850, 2010

5.5 New Considerations

While LLNL has undertaken both demolition and new construction activities, the basic appearance and operations at both LLNL sites are intact and recognizable from the 2007 report. The changes in emphasis among the mission areas have not had a significant impact on the built environment in the five years since the original assessment. The most notable anticipated impact to the environment is the introduction of more decorative features into new construction at the main site, which ultimately will alter the overall tone of the site's design.

5.5.1 Demolition

As LLNL is an active research and development facility, buildings and structures are removed when no longer needed, making space available for new facilities and cleaning up unused properties to avoid unnecessary future maintenance as well as reduction of the overall footprint of the Lab. No NRHP-eligible properties were demolished since completion of the 2007 report.

In terms of the physical appearance of LLNL, the most notable demolition effort was the removal of most of Building 212, Drill Hall. The building now has a much-reduced footprint, as the original drill hall portion of the facility was removed, leaving a large empty spot in its former location (**Figure 5**). Only the concrete elements with the accelerator-shielding block on the building's east end remain, as seen in **Figure 6**.

Figure 5. Empty fenced lot where the drill hall portion of Building 212 once stood, 2010

Figure 6. Much-reduced Building 212, 2010

5.5.2 Construction

The LLNL building list used in the 2007 report was from 2003 when the research for the original historic building survey and assessment began. Since then, 35 new buildings and structures have been constructed within the LLNL main site and Site 300, as listed in **Table 5**. The list includes both support facilities and technical, mission-related buildings housing scientific research and testing.

Table 5. LLNL Buildings Constructed, 2003-2010

Site	Asset ID	Facility Name	Facility Age	Gross sq. ft.
MAIN SITE	140	G.S	8	66,660
MAIN SITE	142	PLS OFFICE	7	20,306
MAIN SITE	155	ISF OFFICE	8	21,742
MAIN SITE	242	OFFICE	7	20,328
MAIN SITE	264	ESH OFFICES	6	20,461
MAIN SITE	368	G.S/BSL-3 LABORATORY	6	1,590
MAIN SITE	453	TERA SCALE FACILITY	7	240,598
MAIN SITE	471	CENTRAL CAFETERIA	7	16,086
MAIN SITE	581	THE NATIONAL IGNITION FACILITY	9	693,172
MAIN SITE	583	OFFICE	5	21,793
MAIN SITE	610	TRUCK INSPECTION STATION	7	4,314
MAIN SITE	653	EPD SAMPLE STAGING	6	96
MAIN SITE	3304	TOILET TRAILER	8	128
MAIN SITE	4352	ERD OFC-FIELD OPERATIONS	9	240

Site	Asset ID	Facility Name	Facility Age	Gross sq. ft.
MAIN SITE	5675	STAFF RELATIONS	8	4,259
MAIN SITE	6301	RIGGER STORAGE	7	732
MAIN SITE	6929	NIF OFFICE TRAILER	6	4,759
MAIN SITE	6930	NIF OFFICE TRAILER	6	5,892
MAIN SITE	6931	NIF CONSTRUCTION BREAKROOM	2	1,405
MAIN SITE	012D	EAST AVENUE SECURITY STORAGE	5	205
MAIN SITE	231A	BEAD BLASTER-RECEIVING	7	110
MAIN SITE	OS012A	SECURITY KIOSK	8	26
MAIN SITE	OS012B	SECURITY KIOSK	8	26
MAIN SITE	OS012C	SECURITY KIOSK	8	26
MAIN SITE	OS231S	SECURITY KIOSK	7	90
MAIN SITE	OS321E	SECURITY KIOSK	7	54
MAIN SITE	OS454	TSF COOLING TOWERS	7	3,375
MAIN SITE	OS513	E85 FUELING STATION	3	
MAIN SITE	OS601	GUARD KIOSK	5	83
SITE 300	8580	BREAKROOM TRAILER	5	384
SITE 300	809B	MECHANICAL SUPPORT	8	617
SITE 300	OS812P	MITIGATION POND	6	0
SITE 300	OSM10	HE STORAGE MAGAZINE	9	104
SITE 300	OSM15	HE STORAGE MAGAZINE	9	120
SITE 300	U849C	COMM RADIO TWR CNTRL BLDG	9	336

The buildings are all too young for NRHP eligibility. It is worth noting their presence and architectural design elements, however, in anticipation of understanding their impact on the overall site environment.

The support buildings and basic laboratories remain largely utilitarian in design, as reflected in Buildings 368 (**Figure 7**), 610 (**Figure 8**), and 653 (**Figure 9**). They are prefabricated metal buildings with no adornment or other architectural features of note.

Figure 7. Building 368, BSL-3 laboratory, 2010

Figure 8. Building 610, truck inspection station, 2010

Figure 9. Building 653, sample-staging site, 2010

Office buildings and mission-related technical buildings reflect a more aesthetic design approach. This is a continuation of earlier design decisions, first articulated mildly in the 1968 *Long-Range Master Development Plan,* which suggested improving landscaping to make the environment more congenial for staff and visitors. This approach was expanded in the 1980s with wider use of decorative elements. Current designs make more use of glass and decorative trim, as well as larger, more impressive entrances, following on architectural design motifs introduced in the 1980s. As with earlier laser facilities and unlike older weapons facilities, these new buildings are meant to be attractive, displaying a concern with landscaping and the overall impression that buildings make on visitors and business partners.

Most of the new office buildings display clean lines and simple, unadorned, minor decorative features. Buildings 142, 242, and 264 are based on the same basic design by RMW Architecture & Interiors. They feature slat awnings over east- and west-facing windows, as shown in **Figures 10, 11,** and **12**.

Figure 10. Building 142, office building, 2010

Figure 11. Building 242, office building, 2010

Figure 12. Building 264, office building, 2010

Other buildings, including the technical, mission-related buildings, display more distinctive designs with decorative features. They flaunt impressive, attractive entrances, and, as is popular in commercial architecture currently, use a variety of materials to achieve an eclectic, somewhat high-tech look. They are not necessarily consistent in design with other buildings near them. As shown in **Figure 13**, Building 155, housing offices, features a heavy, striated concrete exterior, with tall two-story window sections giving it a sense of height. Designed by Fong & Chan Architects, the building is not massive, but feels monolithic due to its design.

Figure 13. Building 155, ISF offices, 2010

Building 471, the central cafeteria, takes advantage of its location on the edge of Lake Haussman near the center of the LLNL main site, to present open, welcoming design. GEZ Architects Engineers designed it with a wraparound patio on the south to east sides, sloping roofs, and light colors, as illustrated in **Figure 14**.

Figure 14. Building 471, central cafeteria, 2010

Building 453, the Terascale Simulation Facility, is one of the more impressive of the new construction. Designed by RMW Architecture & Interiors, the building displays a mix of materials and design elements. Different building sections rise to different heights and there are multiple sweeping features, such as the curved glass outer wall of the south section, that emphasize the building's size and gives it a sense of movement. **Figures 15** and **16** display the building's architectural features; note the use of multiple types of materials and the sense of size presented by the glass on the south side in contrast to the more traditional International-Style lines of windows on the north side. The overall design projects significance, reflecting the importance currently placed on high-performance computing within LLNL.

Figure 15. Building 453, Terascale Simulation Facility, south side, 2010

Figure 16. Building 453, Terascale Simulation Facility, north side, 2010

Buildings 581 and 583, both NIF facilities, reflect the earlier NIF designs and fit in well with the approach taken for laser fusion research. The buildings are large and basically unadorned, as illustrated in **Figures 17** and **18**. Their clean lines reflect a functional sensibility.

Figure 17. Building 581, National Ignition Facility, 2010

Figure 18. Building 583, NIF offices, 2010

5.5.3 Reconsideration of Three Buildings from 2007 Report

Three buildings covered by the survey included in the 2007 report need to be reconsidered in this re-evaluation. Building 111 needs to be re-evaluated periodically under Criterion C of the Secretary of the Interior's guidelines for assessing historic properties because it housed LLNL's laboratory directors from 1969 to the present. Buildings 112 and 262 were not on the building list used for the 2007 report.

Building 111: The 2005 recommendation regarding Building 111, the Director's Office, was that it not be considered NRHP eligible. While that evaluation under Criteria A, C,

and D appears correct and unchanged by the events of the past five years, the passage of time requires periodic reconsideration of the building's eligibility under Criterion B, association with a person or persons of recognized historical importance. LLNL's directors have been of consistently high caliber, having made noted contributions to their fields of study prior to rising in administration and serving as key LLNL figures while in the position of Laboratory Director. A few—Herbert York, Edward Teller, and John Foster, for example—are clearly recognized as figures important in national and international history. These early directors had offices in Buildings 161 and 121, neither of which retains any integrity for the period of the directors' occupancy.

Building 111 replaced Building 121 as the location for the Director's offices in 1969, when it opened. The directors who had offices there are Michael May (director 1965-1971), Roger Batzel (1971-1988), John Nuckolls (1988-1994), C. Bruce Tarter (1994-2002), Michael Anastasio (2002-2006), George H. Miller (2006-2011), and Penrose (Parney) Albright (2011-present). Of these, John Nuckolls has the clearest claim to being considered a historical figure. The others may be found to have broad national or international significance by later historians, but they do not appear in the historical literature in that manner at this time.

John Nuckolls is a key figure in the history of the science of controlled thermonuclear fusion, particularly inertial confinement fusion. His pioneering research makes him a key figure in establishing LLNL's laser fusion program. However, he is recognized not just for his role within LLNL, but for the contributions his LLNL research made to his field more broadly. He was critical in defining the research paths taken in laser fusion research. This work was conducted in the decades prior to his rise to the position of LLNL Director, and, although he was significant in the transition LLNL faced at the end of the Cold War, he is not a historical figure for work done while in Building 111. The laser fusion program research is housed elsewhere in buildings that have already been recognized as historically significant. The recommendation from this re-evaluation is that Building 111 is not eligible for the NRHP.

Building 112: The 2007 report based its evaluations on the LLNL building list, which at the time did not include Building 112. As Building 112 and 113 are connected, 112 was included as part of the evaluation of 113. Building 112, computer center, is pictured in **Figure 19**. The building is a steel-reinforced concrete structure with tilt-up exterior wall panels with a smooth finish. Since 2007, it has housed computing operations. The connected buildings were vacant when assessed for the 2007 report and did not reflect earlier work housed in them; the current computing work in the building is quite young and, while it should be evaluated as time passes, it does not appear to be historically significant at this time. The recommendation is that Building 112 not be considered eligible for the NRHP.

Figure 19. Building 112, computer center, 2010

Building 262: The building list used for the 2007 report did not include Building 262. As Building 261 and 262 are connected, 262 was included as part of the evaluation of 261. They housed Project Rover activities; neither retains integrity for that early research. The recommendation is that Building 262 not be considered eligible for the NRHP.

5.5.4 Evaluation of Site as a Whole

The 2007 report did not specifically address the question of the eligibility of the entirety of LLNL's main site or Site 300 to the NRHP. An overall site evaluation was conducted during the preparation of the report and the assessment of each specific building included its potential district eligibility; the main site and Site 300 as whole entities did not prove eligible in these assessments.

The following factors were central to the rationale for this recommendation:

- for those districts identified, the scope of the district was specified and in no cases did it coincide with the entire LLNL site or with all of Site 300,
- the current main site represents a mélange of historic and recent activities, as is to be expected of an active scientific facility, and
- the main site as a whole does not represent the historically significant events associated with the cold War themes identified in the historic context statement.

This re-evaluation generated no additional information to alter this conclusion and the recommendation remains that the main LLNL site and Site 300 are not eligible for the NRHP as whole districts.

6.0 CONCLUSION

6.1 Summary of Recommendations from Re-Evaluation

This re-evaluation does not recommend significant changes to the list of NRHP-eligible buildings at LLNL. Building 391 should be removed from the list of eligible buildings. Building 810A should be added to the buildings included in the Site 300 Process Area District. B865E should be included with B865A and considered NRHP-eligible as well. No buildings need to be added to the list of individual buildings eligible for the NRHP

Minor adjustments should be made to the themes of the Post-Cold War historic context. More importantly, the Post-Cold War context should be re-evaluated in the long term.

Final recommendations from this re-evaluation are:

- Building 810A should be added to the Site 300 Process Area and Chemistry Area Historic District;
- Buildings 810B and Building 810C should not be included in the Site 300 Process Area and Chemistry Area Historic District, due to their age and lack of contribution to the early decades of explosive processing operations;
- The eligible components of the Building 865 Complex include 865A and 865E;
- Building 332, which was determined by LSO in consultation with the California SHPO to be NRHP eligible, has been preserved via recordation, and should be allowed to evolve as needed to meet LLNL's scientific mission requirements. Eventually, it will likely lose integrity for its period of historic significance and not be considered NRHP-eligible;
- Building 391, which was determined by LSO in consultation with the California SHPO to be NRHP eligible, has been preserved via recordation, has evolved significantly, and should no longer be considered NRHP-eligible for NOVA and the laser work that preceded it; and
- Non-Weapons Computing and Anti-Terror Research should be added to the list of themes within the Non-Weapons Research category of the Post-Cold War context.

6.2 Areas to Address in 2015 Re-Evaluation

As always, upcoming evaluations should consider any major breakthroughs in LLNL's technical work and should consider any historical recognition of past events and people.

Certainly any changes in the historical understanding of the Cold War should be addressed, as well as any refinements to the definition of the Post-Cold War context.

The 2015 five-year re-assessment should

- re-evaluate the eligibility of the main site and Site 300 for the NRHP as historic districts,
- consider any major breakthroughs and any historical recognition of past events or people,
- address the current status of buildings and districts previously found NRHP eligible,
- begin development of the post-Cold War context and provide a deeper understanding of relevant themes for LLNL within the post-1990 period, and
- begin assessing post-1990 buildings for exceptional significance, as the youngest of them will be 25 years old.

7.0 REFERENCES

All building drawings listed in this report and appendices are located in LLNL's Facility & Infrastructure Document Control Center (LLNL Plant Engineering Library).

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Appendix I. List of All Buildings and Structures at LLNL Main Site and Site 300

Site	Asset ID	Facility Name	Facility Age	Gross Sq Ft
MAIN SITE	002LS	LANDSCAPING		
OFF SITE	003A	S PROGRAM	1	3,750
OFF SITE	008	LLNS OFF-SITE OFFICE	4	3,156
MAIN SITE	012D	EAST AVENUE SECURITY STORAGE	5	205
MAIN SITE	021CA	CMPRSSED AIR SYS COMPRESSOR CTRL		
MAIN SITE	022CA	CMPRSSED AIR SYS COMPRESSOR CTRL NW		
MAIN SITE	023CA	CMPRD AIR SYS DIST LINES		
MAIN SITE	02AL	SITEWIDE ACCELERATORS	34	
MAIN SITE	02CND	RETURN LINES / CONDENSATE		
MAIN SITE	02CSL	COMM SYSTEM LINES		
MAIN SITE	02EDT	ELECTRIC DIST TRANSFORMERS		
MAIN SITE	02EGU	UTIL ELECT GENERATORS		
MAIN SITE	02EPL	UTIL ELEC PRI DIST LINES		
MAIN SITE	02EPT	ELEC POWER TRANSFORMERS		
MAIN SITE	02ESL	UTIL ELEC SEC DIST LINES		
MAIN SITE	02FAS	FIRE ALARM SYSTEM		
MAIN SITE	02FNC	ALL OTHER FENCES		
MAIN SITE	02GAWR	GARAGE AUTO WASH RACK		
MAIN SITE	02GSDL	GAS SYS DIST LINES		
MAIN SITE	02LGS	UTIL ELECT SUBSTATIONS		
MAIN SITE	02LLIX	LLIX CABLE SYSTEM		
MAIN SITE	02MFEST	ERD STORAGE AREA		
MAIN SITE	02OST	STORAGE OIL TANKS TO-1		
MAIN SITE	02PRK	ALL OTHER PARKING AREAS		
MAIN SITE	02RDP	ROADS PAVED		
MAIN SITE	02RDU	ROADS UNPAVED & IMPROVED		
MAIN SITE	02RTW	RETAINING WALLS		
MAIN SITE	02SAS	SECURITY ALARM SYSTEM		
MAIN SITE	02SCL	ALL OTHER SECURITY LIGHTG		
MAIN SITE	02SCSG	SEWER COLL SYST GRAVITY		
MAIN SITE	02STL	ALL OTHER STREET LIGHTING		
MAIN SITE	02STM	SUPPLY LINES / STEAM		
MAIN SITE	02SWCS	STORM WATER COLL SYS GRAV		
MAIN SITE	02SWP	ALL OTHER SIDEWALKS & PATHS		
MAIN SITE	02TS	TRUCK SCALE		

MAIN SITE	02WRS	WASTE RETENTION SYSTEM		
MAIN SITE	041	LONG TERM STORAGE	24	25,555
MAIN SITE	071	WESTGATE BADGE OFFICE	19	4,166
MAIN SITE	110	STORAGE	20	153
MAIN SITE	111	DIRECTORS OFFICE	42	112,418
MAIN SITE	112	COMPUTER CENTER	45	45,512
MAIN SITE	113	G.S	45	44,426
MAIN SITE	115	COMPUTATION FACILITY BLDG	57	17,140
MAIN SITE	116	G.S	53	7,781
MAIN SITE	117	COMPUTATION FACILITY BLDG	58	11,370
MAIN SITE	118	TELECONFERENCE FACILITY	24	1,505
MAIN SITE	121	PLS OFFICE	56	90,759
MAIN SITE	122	PROTOCOL OFFICE	42	962
MAIN SITE	123	AUDITORIUM	53	7,742
MAIN SITE	125	WEST CAFETERIA	52	12,513
MAIN SITE	1277	VACANT	26	4,117
MAIN SITE	1280	VACANT	17	5,760
MAIN SITE	131	ENGINEERING	52	285,308
MAIN SITE	132N	DPRF	16	251,316
MAIN SITE	132S	G.S	17	219,385
MAIN SITE	133	CENTRAL PLANT/DPRF/NTTC	17	5,631
MAIN SITE	134	G.S/STORAGE	16	1,284
MAIN SITE	135	G.S/STORAGE	16	1,369
MAIN SITE	140	G.S	8	66,660
MAIN SITE	141	ELECTRONIC SHOPS	57	47,342
MAIN SITE	142	PLS OFFICE	7	20,306
MAIN SITE	151	ISOTOPE SCIENCES FACILITY	43	96,030
MAIN SITE	152	GENERATOR HOUSE	34	751
MAIN SITE	153	MICROFABRICATION LAB	22	25,976
MAIN SITE	154	BIO SECURITY & NANOSCIENCES LAB	21	9,450
MAIN SITE	155	ISF OFFICE	8	21,742
SITE 300	15AL	SITEWIDE ACCELERATORS	32	
SITE 300	15CASC	CONPRD AIR SYS COMPRESS		
SITE 300	15CSL	COMM SYSTEM LINES		
SITE 300	15CW	WATER SYS POTBL DIST		
SITE 300	15EDT	ELECT DIST TRANSFORMERS		
SITE 300	15EGV	UTILITY ELEC GENERATORS		
SITE 300	15EPL	UTIL PRI ELEC DIST LINES		
SITE 300	15EPT	ELEC POWER TRANSFORMERS		
SITE 300	15ESL	UTIL ELEC SEC DIST LINES		
SITE 300	15FAS	FIRE ALARM SYSTEM		

SITE 300	15FNC	ALL OTHER FENCES		
SITE 300	15GDS	GAS DIST SYSTEM		
SITE 300	15HS	HEATING SYS / BOILERS / OIL		
SITE 300	15LGS	UTIL ELEC SUBSTATIONS		
SITE 300	15LS	LANDSCAPING		
SITE 300	15RW	RETAINING WALL		
SITE 300	15RWPA	ROADS WALKS PAVED AREAS		
SITE 300	15SAS	SECURITY ALARM SYSTEM		
SITE 300	15SCL	ALL OTHER SECURITY LIGHTGS		
SITE 300	15SCSG	SEWAGE COLL SYS GRAVITY		
SITE 300	15SOT	STORAGE OIL TANK		
SITE 300	15SPS	SEWAGE POND / SEPTIC & RETN TKS		
SITE 300	15STL	ALL OTHER STREET LIGHTING		
SITE 300	15WST	WATER STORAGE TANKS - 11	52	
MAIN SITE	1601	VACANT	34	2,199
MAIN SITE	1602	VACANT	32	2,160
MAIN SITE	161	JUPITER LASER SUPPORT	34	6,105
MAIN SITE	162	RESEARCH/CRYSTAL GTH	51	19,042
MAIN SITE	1631	VACANT	24	1,443
MAIN SITE	1632	VACANT	17	4,297
MAIN SITE	164	MACHINE SHOP	24	207
MAIN SITE	165	OPTICS/DEVELOPMENT LAB	53	10,053
MAIN SITE	166	DEVELOPMENT LAB	51	13,226
MAIN SITE	1677	IMF MANAGED OFFICE FACILITY	19	28,576
MAIN SITE	1678	VACANT	18	3,550
MAIN SITE	1680	VACANT	23	5,696
MAIN SITE	170	NARAC FACILITY	16	43,760
MAIN SITE	170A	VACANT	15	800
MAIN SITE	1713	TOILET TRAILER	19	335
MAIN SITE	1714	SHOWER FACILITY	12	270
MAIN SITE	1726	JUPITER SUPPORT	32	2,160
MAIN SITE	1727	JUPITER TECH SUPPORT	33	1,884
MAIN SITE	173	PLS WELD SHOP	54	413
MAIN SITE	1730	JUPITER VISITORS	30	2,100
MAIN SITE	1735	JUPITER MAIN OFFICE	27	3,279
MAIN SITE	1736	SECURITY TRAINING	26	4,591
MAIN SITE	1739	JUPITER OFFICES	22	5,646
MAIN SITE	174	PLS	54	19,437
MAIN SITE	175	IMF MANAGED LAB	31	16,656
MAIN SITE	176	PLS SHOP	54	3,973
MAIN SITE	179	PLS	27	2,720

MAIN SITE	1802	TOILET TRAILER	12	411
MAIN SITE	181	PLS	22	13,532
MAIN SITE	182	VACANT	29	2,027
MAIN SITE	1826	VACANT	33	3,632
MAIN SITE	1878	VACANT	29	6,292
MAIN SITE	1879	LABORATORY TRAINING CNTR	25	11,118
MAIN SITE	1884	VACANT	19	2,880
MAIN SITE	1885	VACANT	19	4,210
MAIN SITE	1886	VACANT	19	3,643
MAIN SITE	1887	VACANT	19	5,089
MAIN SITE	1888	VACANT	19	11,520
MAIN SITE	1889	LABORATORY TRAINING CENTER	19	16,821
MAIN SITE	190	CAMS FACILITY	24	10,252
MAIN SITE	191	HEAF	22	121,028
MAIN SITE	1925	PLS OFFICE	26	2,236
MAIN SITE	1927	VACANT	28	2,160
MAIN SITE	193A	EPD/ORAD SRVC-MNTRNG STAT	13	151
MAIN SITE	194	PLS	53	41,543
MAIN SITE	194A	VACANT	31	240
MAIN SITE	195	EPD/ORAD SHOP	41	400
MAIN SITE	196	EPD/ORAD SRVC-MNTRNG STAT	30	853
MAIN SITE	196A	EPD/ORAD STORAGE	17	112
MAIN SITE	197	PLS LAB FACILITY	27	10,716
MAIN SITE	198	MACHINE SHOP	26	959
MAIN SITE	211	PLS	13	14,122
MAIN SITE	212	VACANT	59	3,770
MAIN SITE	214	VACANT	57	4,837
MAIN SITE	216	CYBER SECURITY	59	18,976
MAIN SITE	217	VACANT	59	17,999
MAIN SITE	218	VACANT	59	17,956
MAIN SITE	2180	VACANT	15	1,764
MAIN SITE	219	IMF MANAGED OFFICE FACILITY	59	18,429
MAIN SITE	221	VACANT	40	1,764
MAIN SITE	231	DEVLMT & ASSBLY ENGNG	57	142,403
MAIN SITE	231A	BEAD BLASTER-RECEIVING	7	110
MAIN SITE	233	MATERIALS MANAGEMENT	51	4,933
MAIN SITE	234	MATERIALS MGMT OFFICE	16	5,261
MAIN SITE	235	WMRDF	24	88,175
MAIN SITE	239	RADIOGRAPHY	42	12,904
MAIN SITE	241	VACANT	51	54,369
MAIN SITE	242	OFFICE	7	20,328

MAIN SITE	243	VACANT	52	20,000
MAIN SITE	251	VACANT	55	31,128
MAIN SITE	2512	VACANT	18	360
MAIN SITE	252	HC/SHIPNG/RECEIVNG SHED	18	191
MAIN SITE	2525	VACANT	30	2,160
MAIN SITE	253	HC DEPT OFFICES & LABS	52	30,932
MAIN SITE	254	HC BIO ASSAY LAB	51	2,488
MAIN SITE	255	HC SPD LABS-OFFICES	42	21,855
MAIN SITE	2552	VACANT	19	2,100
MAIN SITE	2554	VACANT	26	740
MAIN SITE	256	TELCOM NODE #1	26	5,937
MAIN SITE	2580	SECURE COMMUNICATION CENTER	19	4,296
MAIN SITE	261	VACANT	57	52,655
MAIN SITE	262	G.S	53	10,882
MAIN SITE	2625	VACANT	18	240
MAIN SITE	2627	VACANT	25	1,867
MAIN SITE	263	VACANT	21	51
MAIN SITE	2632	SECURITY	16	2,817
MAIN SITE	264	ESH OFFICES	6	20,461
MAIN SITE	2679	VACANT	23	12,310
MAIN SITE	2684	VACANT	22	5,284
MAIN SITE	2685	VACANT	23	4,320
MAIN SITE	2687	VACANT	23	2,100
MAIN SITE	2701	SECURITY SHOWER TRAILER	26	696
MAIN SITE	271	PROTECTIVE FORCE	38	18,874
MAIN SITE	272	PLS	29	10,124
MAIN SITE	2726	OFFICE	27	2,098
MAIN SITE	2727	LOCKS AND KEYS	22	5,090
MAIN SITE	2728	VACANT	29	2,160
MAIN SITE	274	SECURITY ADMINISTRATION	17	21,436
MAIN SITE	2775	SECURITY	33	9,875
MAIN SITE	2777	SECURITY ARMORY	30	1,391
MAIN SITE	2787	SECURITY FITNESS FACILITY	22	2,114
MAIN SITE	280	VACANT	55	5,469
MAIN SITE	2801	VACANT	36	2,199
MAIN SITE	2802	VACANT	36	2,160
MAIN SITE	2808	TOILET TRAILER	43	242
MAIN SITE	281	LABORATORY	55	18,505
MAIN SITE	282	PLS	25	2,160
MAIN SITE	2825	OFFICE	30	5,959
MAIN SITE	292	CAMS LAB FACILITY	32	20,811

MAIN SITE	2925	VACANT	29	4,917
MAIN SITE	293	CAMS LAB FACILITY	30	800
MAIN SITE	294	CAMS LAB FACILITY	27	970
MAIN SITE	297	PAPER DISPOSAL	43	1,086
MAIN SITE	297A	MUSD CLASS DOC DESTRUCTION	43	335
MAIN SITE	298	TARGET FABRICATION	29	47,986
MAIN SITE	311	DOE OFFICES	45	40,951
MAIN SITE	312	IMF MANAGED FACILITY	55	11,482
MAIN SITE	312A	VACANT	25	107
MAIN SITE	313	REGIONAL DISPATCH CENTER	49	4,352
MAIN SITE	314	DIR.OFF/QA	59	13,238
MAIN SITE	315	ESH ENVIRONMENTAL PROT	59	18,133
MAIN SITE	316	DIRECTORS OFFICE	59	14,090
MAIN SITE	317	NETWORKING GROUP FACILITY	44	1,426
MAIN SITE	318	POOL CHANGE ROOM	59	6,112
MAIN SITE	3180	VACANT	34	4,371
MAIN SITE	319	IMF MANAGED OFFICE FACILITY	59	18,048
MAIN SITE	3203	MATERIAL FABRICATION DIV	33	649
MAIN SITE	3204	VACANT	33	649
MAIN SITE	321A	MATERIALS FAB SHOP	56	59,515
MAIN SITE	321B	MATERIALS FAB SHOP	56	7,511
MAIN SITE	321C	MATERIALS FAB SHOP	56	78,335
MAIN SITE	321D	EE FABRICATION	56	2,106
MAIN SITE	321E	MMED BOILER ROOM	56	2,581
MAIN SITE	322	PLATING SHOP	49	5,704
MAIN SITE	3226	VACANT	29	3,077
MAIN SITE	322A	PLATING SHOP ANNEX	49	340
MAIN SITE	323	EMERGENCY SERVICES / FIRE STATION#1	52	18,555
MAIN SITE	324	EMERGENCY SERVICES / ALARMS OFFICE	52	10,181
MAIN SITE	326	VACANT	58	3,516
MAIN SITE	327	RADIOGRAPHY	52	19,100
MAIN SITE	329	LASER WELD SHOP	26	5,150
MAIN SITE	3304	TOILET TRAILER	8	128
MAIN SITE	331	TRITIUM FACILITY	52	30,484
MAIN SITE	332	PU FACILITY	51	104,787
MAIN SITE	334	HETB	26	10,668
MAIN SITE	3340	OFFICES	9	2,160
MAIN SITE	335	SUPPORT FACILITY	28	11,988
MAIN SITE	335A	EMRGCY RESPONSE FACILITY	15	64
MAIN SITE	335B	EMRGCY RESPONSE FACILITY	15	64
MAIN SITE	336	SOUTH SECURITY PORTAL	21	792

MAIN SITE	337	NW SECURITY PORTAL	21	792
MAIN SITE	341	VACANT	47	44,184
MAIN SITE	3427	VACANT	19	6,365
MAIN SITE	343	IMF MANAGED OFFICE/LAB FACILITY	51	27,368
MAIN SITE	345	VACANT	48	9,467
MAIN SITE	3526	HUMAN RELIABILITY PROGRAM	22	2,165
MAIN SITE	3527	DOE OFFICES	17	9,782
MAIN SITE	3555	HUMAN RELIABILITY PROGRAM	14	508
MAIN SITE	3577	VACANT	22	4,290
MAIN SITE	361	BIOSCIENCES RESEARCH	42	68,889
MAIN SITE	362	VACANT	47	3,766
MAIN SITE	363	VACANT	46	1,584
MAIN SITE	364	BIOSCIENCES RESEARCH	42	10,932
MAIN SITE	3649	VACANT	16	4,800
MAIN SITE	365	G.S/BIO LAB	31	8,825
MAIN SITE	366	BIOSCIENCES RESEARCH	29	2,631
MAIN SITE	367	VACANT	25	629
MAIN SITE	368	G.S/BSL-3 LABORATORY	6	1,590
MAIN SITE	3724	COMPUTATION FACILITY BLDG	35	19,810
MAIN SITE	3725	NIF DIRECTORATE OFFICES	35	19,867
MAIN SITE	3726	NIF DIRECTORATE OFFICES	35	19,824
MAIN SITE	373	BIO WAREHOUSE	18	1,768
MAIN SITE	3751	VACANT	22	2,160
MAIN SITE	376	VACANT	32	1,575
MAIN SITE	3775	VACANT	18	1,440
MAIN SITE	378	LAB SPACE	29	3,840
MAIN SITE	379	LAB SPACE	27	1,500
MAIN SITE	381	OFFICE/RESEARCH	36	95,421
MAIN SITE	382	TECH SUPPORT	34	303
MAIN SITE	383	MACHINE SHOP	29	6,715
MAIN SITE	391	DEVELOPMENT LABS	33	197,841
MAIN SITE	392	OPTICS LABORATORY	26	8,413
MAIN SITE	3925	REDWOOD RM.-CONF./CLASSROOM	31	1,081
MAIN SITE	3982	VACANT	22	1,800
MAIN SITE	404	MUSD / BATTERY SHOP / WAREHOUSE	59	6,460
MAIN SITE	405	VACANT	59	8,636
MAIN SITE	406	VACANT	32	449
MAIN SITE	4107	VACANT	26	388
MAIN SITE	411	SHIPPING/RECEIVING	55	71,625
MAIN SITE	4113	PAINT SHOP STORAGE	22	183
MAIN SITE	415	EMPLOYEE RESOURCES	59	19,297

MAIN SITE	418	MUSD PAINT SHOP	53	12,167
MAIN SITE	423	BEAM RESEARCH MACHINE SHOP	58	7,791
MAIN SITE	4302	ERD OFFICES	34	5,022
MAIN SITE	431	BEAM RESEARCH CENTER	58	54,545
MAIN SITE	4316	VACANT	46	299
MAIN SITE	432	IMF MANAGED LAB FACILITY	47	33,575
MAIN SITE	433	LABOR ONLY METAL SHOP	28	5,793
MAIN SITE	435	VACANT	51	57,724
MAIN SITE	4352	ERD OFC-FIELD OPERATIONS	9	241
MAIN SITE	436	PLS SHIPPING/RECEIVING/STORAGE	55	9,745
MAIN SITE	4377	ERD OFFICES	34	4,920
MAIN SITE	4378	ERD OFFICES	23	5,180
MAIN SITE	438	ERD OFC-FIELD OPERATIONS	31	16,262
MAIN SITE	4382	VACANT	19	3,583
MAIN SITE	4383	VACANT	22	4,988
MAIN SITE	4384	VACANT	22	1,577
MAIN SITE	4385	VACANT	22	3,744
MAIN SITE	4387	VACANT	22	3,658
MAIN SITE	4388	VACANT	22	320
MAIN SITE	439	INSTITUTIONAL COMPUTING/ARCHIVES	31	12,055
MAIN SITE	4406	VACANT	36	1,560
MAIN SITE	442	ERD / D&D OPERATIONS	48	4,169
MAIN SITE	443	VACANT	50	8,953
MAIN SITE	444	VACANT	55	805
MAIN SITE	445	VACANT	29	5,100
MAIN SITE	446	VACANT	51	1,743
MAIN SITE	4475	VACANT	28	4,176
MAIN SITE	451	COMPUTATION FACILITY BLDG	31	51,398
MAIN SITE	452	COMPUTATION FACILITY BLDG.	27	492
MAIN SITE	4525	COMPUTATION FACILITY BLDG	26	5,736
MAIN SITE	453	TERA SCALE FACILITY	7	240,598
MAIN SITE	4576	COMPUTATION FACILITY BLDG	18	854
MAIN SITE	4675	EMPLOYEE RESOURCES	32	11,142
MAIN SITE	471	CENTRAL CAFETERIA	7	16,086
MAIN SITE	4725	VACANT	18	9,389
MAIN SITE	4726	S&T / COMP	18	9,384
MAIN SITE	4727	O&B TID LIBRARY	18	9,891
MAIN SITE	4728	COMPUTATIONS	18	6,762
MAIN SITE	4729	O&B TID LIBRARY	18	10,018
MAIN SITE	473	VACANT	23	205
MAIN SITE	481	OFFICE	29	61,253

MAIN SITE	482	OFFICE	28	108,000
MAIN SITE	490	IMF MANAGED LAB FACILITY	28	216,789
MAIN SITE	4905	VACANT	41	323
MAIN SITE	4906	VACANT	41	323
MAIN SITE	491	VACANT	27	13,259
MAIN SITE	492	VACANT	27	9,550
MAIN SITE	4924	VACANT	8	665
MAIN SITE	4926	VACANT	34	1,641
MAIN SITE	493	SUPPORT FACILITY/STORAGE	24	19,100
MAIN SITE	494	STORAGE	22	29,961
MAIN SITE	501	DUS OFFICE	11	200
MAIN SITE	509	MUSD SHEET MTL SHOP STO	33	256
MAIN SITE	510	MUSD / FACS / UPS BATTERY BANK	27	144
MAIN SITE	5104	INDUSTRIAL GAS FACILITY	33	624
MAIN SITE	5105	LABOR ONLY CONSTRUCTION	46	627
MAIN SITE	511	MUSD / CRAFTS SHOP	59	77,078
MAIN SITE	512	MUSD / CRAFTS SUPPLIES	47	8,128
MAIN SITE	5125	LABOR ONLY CONSTRUCTION OFFICE	36	2,590
MAIN SITE	514A	VACANT	22	2,530
MAIN SITE	515	MUSD / CRAFTS STORAGE	45	8,497
MAIN SITE	516	PE/CRAFTS FACILITY/ME	59	6,496
MAIN SITE	517	ELECT UTILITY OFFICES	59	6,090
MAIN SITE	517A	MUSD / CUSTODIAN LAUNDRY RM	26	474
MAIN SITE	518A	INDUSTRIAL GAS STORAGE	18	204
MAIN SITE	519	MUSD / HEAVY EQUIPMENT REPAIR	58	9,788
MAIN SITE	519A	HEAVY EQUIPMENT STORAGE	55	594
MAIN SITE	520	MUSD / PESTICIDE STORAGE	44	400
MAIN SITE	5207	VACANT	41	320
MAIN SITE	522	LABOR ONLY RESTROOM FACILITY	22	515
MAIN SITE	5225	LABOR ONLY CONSTRUCTION OFFICE	33	1,939
MAIN SITE	5226	VACANT	34	2,548
MAIN SITE	523	LABOR ONLY / WELD / CARPTRY WK SHED	26	4,064
MAIN SITE	525	LABOR ONLY ELECT	20	1,632
MAIN SITE	531	ICS OFFICE	28	12,381
MAIN SITE	532	EPD/ORAD SERVICE BLDG	18	198
MAIN SITE	533	EPD/DO STORAGE	27	320
MAIN SITE	5425	VACANT	23	5,256
MAIN SITE	5426	VACANT	23	5,256
MAIN SITE	543	O&B / PFS / SHMR OFFICES	30	78,261
MAIN SITE	5475	ICS DEPT OFFICE	27	32,368
MAIN SITE	5477	IMF MANAGED OFFICE FACILITY	18	6,693

MAIN SITE	551E	O&B / F&I OFFICES	29	40,966
MAIN SITE	551W	BUS/NCOP/TID/SCM	29	65,776
MAIN SITE	5626	AUDIT & OVERSIGHT	18	4,356
MAIN SITE	5627	LEGAL SERVICES	26	8,470
MAIN SITE	5675	STAFF RELATIONS	8	4,277
MAIN SITE	571	NIF OFFICE	26	41,407
MAIN SITE	581	THE NATIONAL IGNITION FACILITY	9	696,968
MAIN SITE	582	SERVICE BUILDING	11	2,927
MAIN SITE	583	OFFICE	5	21,793
MAIN SITE	591	NIF STORAGE	19	3,207
MAIN SITE	597	ERD CORP YARD	25	300
MAIN SITE	597A	ERD RESTRM & SHWR FAC	19	99
MAIN SITE	610	TRUCK INSPECTION STATION	7	4,281
MAIN SITE	611	AUTO FLEET MAINTENANCE	36	15,018
MAIN SITE	612	EPD/RHWM WASTE TSDF	45	7,015
MAIN SITE	6127	EPD/RHWM OFFICE	18	1,560
MAIN SITE	612A	EPD/RHWM WASTE TSDF	22	4,181
MAIN SITE	614	EPD/RHWM WASTE TSDF	45	1,221
MAIN SITE	615	DUS OFFICE	33	3,525
MAIN SITE	616	VACANT	33	2,273
MAIN SITE	6178	EPD/RHWM OFF/CHANGE HOUSE	35	1,040
MAIN SITE	6179	EPD/RHWM OFFICE	26	3,904
MAIN SITE	619	DONATION UTIL&SALES	32	2,038
MAIN SITE	6205	MUSD HEAVY EQUIP. STORAGE	19	404
MAIN SITE	6206	IE STORAGE	18	688
MAIN SITE	622	F&I CORP. YARD	43	1,033
MAIN SITE	624	EPD/RHWM OFFICE	31	240
MAIN SITE	625	EPD/RHWM WASTE TSDF	29	4,854
MAIN SITE	6301	RIGGER STORAGE	7	732
MAIN SITE	6325	VACANT	17	4,320
MAIN SITE	6424	VACANT	8	390
MAIN SITE	6426	VACANT	30	2,100
MAIN SITE	6475	HIGH PERFORMANCE COMPUTING INNOVATION CENTER	0	12,070
MAIN SITE	6501	PUBLIC AFFAIRS OFFICE	22	908
MAIN SITE	651	VISITOR CENTER	35	2,381
MAIN SITE	652	PUBLIC AFFAIRS STORAGE	35	208
MAIN SITE	6525	VISITORS CTR AUDITRM	35	971
MAIN SITE	6526	PUBLIC AFFAIRS OFFICE	35	2,756
MAIN SITE	6527	VACANT	18	2,115
MAIN SITE	653	EPD SAMPLE STAGING	6	96

MAIN SITE	6575	PUBLIC AFFAIRS OFFICE	22	1,460
MAIN SITE	663	HEALTH SERVICES	23	24,786
MAIN SITE	671	PROCUREMENT	26	41,476
MAIN SITE	681	OPTICS ASSEMBLY BLDG	11	46,819
MAIN SITE	684	CHEMICAL STORAGE	11	278
MAIN SITE	6870	OFFICE	18	1,444
MAIN SITE	6901	TOILET TRAILER	43	520
MAIN SITE	691	IMF MANAGED LAB FACILITY	29	18,437
MAIN SITE	6925	IMF MANAGED OFFICE FACILITY	22	5,873
MAIN SITE	6926	IMF MANAGED OFFICE FACILITY	20	2,160
MAIN SITE	6928	IMF MANAGED OFFICE FACILITY	22	1,912
MAIN SITE	6929	NIF OFFICE TRAILER	6	4,925
MAIN SITE	693	EPD/RHWM WASTE STORAGE	24	12,000
MAIN SITE	6930	NIF OFFICE TRAILER	6	5,937
MAIN SITE	6931	NIF CONSTRUCTION BREAKROOM	2	1,405
MAIN SITE	694	EPD/RHWM OFFICE	14	10,590
MAIN SITE	695	EPD/RHWM LIQUID WST PROCSSING	12	46,504
MAIN SITE	6951	EPD/RHWM SERVICE BUILDING	31	1,440
MAIN SITE	696	EPD/RHWM WST PRCSSING-SOLID	13	21,381
MAIN SITE	697	EPD/RHWM WRHS-CHEM EXCHG	13	4,118
MAIN SITE	6989	TOILET TRAILER	8	720
OFF SITE	7990	DINE COLLEGE OFFICES	13	850
SITE 300	801A	FIRING FACILITY(FXR)	29	44,262
SITE 300	801B	TECHNICAL MAINTENANCE SHOP	43	790
SITE 300	801D	ADMINISTRATION	17	4,686
SITE 300	802A	VACANT	56	3,264
SITE 300	803	EPD/ORAD STRG WRHS	54	1,719
SITE 300	804	STAGING AREA	53	107
SITE 300	805	INERT MACHNG/EXPLVS WST PACKNG	54	6,830
SITE 300	806A	HE MACHINING	54	3,417
SITE 300	806B	HE MACHINING	54	4,088
SITE 300	806C	MACHINING STORAGE	54	640
SITE 300	806D	MACHINING STORAGE	52	192
SITE 300	807	HE MACHINING	51	1,575
SITE 300	809A	HE PRESSING	52	2,570
SITE 300	809B	MECHANICAL SUPPORT	8	617
SITE 300	809C	HE OVEN FACILITY	47	606
SITE 300	810A	HE ASSEMBLY	39	3,365
SITE 300	810B	HE ASSEMBLY	29	921
SITE 300	810C	ASSEMBLY STORAGE	29	914
SITE 300	811	VACANT	52	1,081

SITE 300	812A	VACANT	51	2,656
SITE 300	812D	VACANT	40	325
SITE 300	812E	LABORATORY	40	1,310
SITE 300	813	CHANGE HOUSE	54	2,870
SITE 300	816	EXPLSE WASTE STRG FAC	14	1,223
SITE 300	817A	HE PRESSING CONTROL ROOM	54	417
SITE 300	817B	HE PRESSING CELL	54	639
SITE 300	817D	HE PRESSING STORAGE	54	207
SITE 300	817E	HE PRESSING-INACTIVE	35	186
SITE 300	817F	HE PRESSING OVENS	54	526
SITE 300	817G	HE PRESSING BOILERS	54	237
SITE 300	817H	HE PRESSING INERT STORAGE	54	890
SITE 300	818A	HE STORAGE FACILITY	47	1,244
SITE 300	818C	HE STORAGE FACILITY	39	578
SITE 300	819	PE/STORAGE-C&M SHOPS	50	828
SITE 300	821	CHEMISTRY STORAGE	50	650
SITE 300	823A	LINAC RADIOGRAPHY	30	1,089
SITE 300	823B	LINAC RADIOGRAPHY	44	1,842
SITE 300	824	HE STORAGE FACILITY	35	300
SITE 300	825	CHEM PROCESS FACILITY	52	1,370
SITE 300	826	CHEM PROCESS FACILITY	50	1,638
SITE 300	827A	CHEMISTRY BLDG	43	4,539
SITE 300	827B	SERVICE SHOP	43	871
SITE 300	827C	CHEM PROCESS FACILITY	43	4,579
SITE 300	827D	CHEM PROCESS FACILITY	43	4,579
SITE 300	827E	CHEM PROCESS FACILITY	43	4,407
SITE 300	828A	VACANT	44	212
SITE 300	828B	VACANT	46	199
SITE 300	828C	VACANT	47	258
SITE 300	830	VACANT	54	1,764
SITE 300	832A	STORAGE	54	540
SITE 300	832C	STORAGE	54	335
SITE 300	832E	MM OFFICE/SHIP&RECEIVE	30	1,581
SITE 300	833	EPD/ERD SERVICE-R&D	52	1,892
SITE 300	8340	EPD/ERD SRVC-MNTRNG TF834	50	282
SITE 300	834A	THERMAL TEST FACILITY	51	1,694
SITE 300	834B	VACANT	51	751
SITE 300	834C	VACANT	51	751
SITE 300	834D	VACANT	51	1,694
SITE 300	834E	VACANT	51	998
SITE 300	834F	VACANT	51	649

SITE 300	834G	VACANT	51	527
SITE 300	834H	THERMAL TEST FACILITY	51	998
SITE 300	834J	VACANT	42	511
SITE 300	834K	PUMP STATION	50	545
SITE 300	834L	VACANT	42	1,281
SITE 300	835	EPD/ERD STORAGE	50	1,216
SITE 300	836A	DYNAMIC TEST FACILITY	41	2,191
SITE 300	836B	STORAGE FACILITY	41	4,505
SITE 300	836C	VACANT	41	2,900
SITE 300	836D	DYNAMIC TEST FACILITY	29	3,427
SITE 300	837	STORAGE FACILITY	44	1,031
SITE 300	841	PE/STORAGE - C&M SHOPS	52	1,786
SITE 300	843A	EPD/ERD CORP YARD	25	486
SITE 300	843B	VACANT	25	402
SITE 300	845A	EXPL WASTE TREATMNT FAC	56	431
SITE 300	845B	EWTF	13	290
SITE 300	848	VACANT	27	1,300
SITE 300	850	VACANT	51	5,095
SITE 300	851A	FIRING FACILITY	51	12,996
SITE 300	851B	MACHINE SHOP	51	985
SITE 300	851C	FABRICATION SHOP	17	652
SITE 300	854A	VACANT	52	2,458
SITE 300	855A	HE MACHINING	52	667
SITE 300	855B	HE MACHINING	52	637
SITE 300	855C	HE MACHINING	50	612
SITE 300	856	VACANT	51	1,613
SITE 300	8580	BREAKROOM TRAILER	5	384
SITE 300	859	STORAGE	52	1,500
SITE 300	860	STORAGE	33	298
SITE 300	865	VACANT	29	61,360
SITE 300	867	BUNKER SUPPORT FACILITY	17	4,342
SITE 300	869	WCI	23	353
SITE 300	870	OFFICE FACILITY	53	4,000
SITE 300	871	ADMINISTRATION	53	7,928
SITE 300	872	PE/PAINT SHOP	56	1,887
SITE 300	8724	VACANT	8	322
SITE 300	8726	EPD/ERD OFFICE	19	953
SITE 300	873	PE/C&M SHOPS	53	17,452
SITE 300	874	MECHANICAL SHOPS	52	19,972
SITE 300	874A	VACANT	31	279
SITE 300	874B	VACANT	31	279

SITE 300	875	PE/SUPPLY & MAINTENANCE	51	15,171
SITE 300	876	STORES & RECLAMATION	51	2,400
SITE 300	877	COMPUTER TECHL SUPPORT	50	3,352
SITE 300	878	PE/MAINT SHOP STORAGE	49	488
SITE 300	879	MOTOR POOL & GARAGE	41	2,879
SITE 300	880	VACANT	48	2,839
SITE 300	8806	VACANT	22	509
SITE 300	882	PFD COMM CENTER	22	4,912
SITE 300	8825	SHOWER FACILITY	14	370
SITE 300	8826	SECURITY FITNESS	14	943
SITE 300	886	CHEMICAL STORAGE	16	36
SITE 300	889	SITE 300 MEDICAL FACILITY	11	2,719
SITE 300	890	SITE 300 FIRE STATION	11	6,863
SITE 300	892	CENTRAL CONTROL POST	17	866
SITE 300	895	EPD/ORAD OFFICE	51	380
SITE 300	8990	B899 A&B WASH UP FACILITY	17	281
SITE 300	8991	INSTRUCTOR FACILITY	12	480
SITE 300	899A	GUN SHOP	40	572
SITE 300	899B	PISTOL RANGE TRNING/OFFICE	40	688
OFF SITE	9997	L ENFANT PLAZA	14	5,274
OFF SITE	9998	THE AMERICAN RED CROSS	4	5,682
MAIN SITE	CW01	WATER SYS POT DISTRIBUTION		
MAIN SITE	CW02	WATER SYS POT SUPPLY LINE		
MAIN SITE	CW03	WATER SYS POT STA(ZONE7)		
MAIN SITE	CW06	STORAGE WATER TANKS		
MAIN SITE	DW001	WATER SYS DW TREAT PLTS		
MAIN SITE	DW002	WATER SYS DW DIST		
MAIN SITE	LCW06	CLG WATER SYS DISTRIBUTION		
MAIN SITE	OS012A	SECURITY KIOSK	8	
MAIN SITE	OS012B	SECURITY KIOSK	8	
MAIN SITE	OS012C	SECURITY KIOSK	8	
MAIN SITE	OS041S	SECURITY KIOSK	21	
MAIN SITE	OS071N	SECURITY KIOSK	19	
MAIN SITE	OS113E	SECURITY KIOSK	36	
MAIN SITE	OS122S	SECURITY KIOSK	41	
MAIN SITE	OS122W	SECURITY KIOSK	25	
MAIN SITE	OS169WAA	EPD/RHWM WASTE ACC AREA	21	
MAIN SITE	OS231S	SECURITY KIOSK	7	
MAIN SITE	OS235N	SECURITY KIOSK	14	
MAIN SITE	OS243W	SECURITY KIOSK	33	
MAIN SITE	OS270	PROGRAMMATIC STORAGE SO PRO FORCE	21	

MAIN SITE	OS273	LINE OF SITE VAULT	42	
MAIN SITE	OS298A	OUTSIDE STORAGE	21	
MAIN SITE	OS316N	SECURITY KIOSK	25	
MAIN SITE	OS321E	SECURITY KIOSK	7	
MAIN SITE	OS321WAA	BUILDING 321 WAA	21	
MAIN SITE	OS332WAA	BUILDING 332 WAA	21	
MAIN SITE	OS338	GUARD TOWER	21	
MAIN SITE	OS361WAA	BIO WST ACCUMLTN AREA	21	
MAIN SITE	OS394	VACANT	35	
MAIN SITE	OS415W	SECURITY KIOSK	20	
MAIN SITE	OS418WAA	BUILDING 418 WAA	21	
MAIN SITE	OS454	TSF COOLING TOWERS	7	
MAIN SITE	OS495	STORAGE	19	
MAIN SITE	OS513	E85 FUELING STATION	3	
MAIN SITE	OS518	GAS CYLINDER DOCK	52	
MAIN SITE	OS601	GUARD KIOSK	5	
MAIN SITE	OS610E	SECURITY KIOSK	18	
MAIN SITE	OS621	CNG FUEL STATION	16	
MAIN SITE	OS651N	SECURITY KIOSK	17	
MAIN SITE	OS665	MEDICAL TRIAGE AREA	21	
MAIN SITE	OS682	NIF CENTRAL PLANT	12	
MAIN SITE	OS683	NIF COOLING TOWER	12	
SITE 300	OS812B	VACANT	55	
SITE 300	OS812C	VACANT	55	
SITE 300	OS812P	MITIGATION POND	6	
SITE 300	OS845C	EWTF BURN PAD	13	
SITE 300	OS858	DROP TOWER COMPLEX STORAGE	33	
SITE 300	OS858B	DROP TOWER - VACANT	51	
SITE 300	OS883	EPD/RHWM CNTNR STRG UNIT	22	
SITE 300	OS891	MAIN GATE KIOSKS A	27	
SITE 300	OS894	PROCESS AREA POST	47	
SITE 300	OS896A	EAST OBSERVATION POST	26	
SITE 300	OS897	WEST CONTROL POST	52	
SITE 300	OS898	WEST OBSERVATION POST	52	
SITE 300	OS899	PISTOL RANGE	40	
SITE 300	OS899C	LIVE FIRE HOUSE	12	
SITE 300	OS899D	RIFLE RANGE	41	
SITE 300	OSM1	MAGAZINE-STORAGE VAULT	49	
SITE 300	OSM10	HE STORAGE MAGAZINE	9	
SITE 300	OSM15	HE STORAGE MAGAZINE	9	
SITE 300	OSM2	HE WASTE STORAGE MAGAZINE	55	

SITE 300	OSM21	MAGAZINE-STORAGE VAULT	56	
SITE 300	OSM22	MAGAZINE-STORAGE VAULT	56	
SITE 300	OSM23	MAGAZINE - STORAGE VAULT	56	
SITE 300	OSM24	MAGAZINE-STORAGE VAULT	52	
SITE 300	OSM3	HE WASTE STORAGE MAGAZINE	55	
SITE 300	OSM30	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM31	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM32	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM33	HE STORAGE MAGAZINE	52	
SITE 300	OSM34	MAGAZINE-HE CUBCL STRGE	52	
SITE 300	OSM35	MAGAZINE-STORAGE VAULT	49	
SITE 300	OSM36	HE STORAGE MAGAZINE	49	
SITE 300	OSM37	MAGAZINE-HE CUBCL STRGE	47	
SITE 300	OSM38	MAGAZINE-STORAGE VAULT	14	
SITE 300	OSM4	HE WASTE STORAGE MAGAZINE	55	
SITE 300	OSM41	MAGAZINE-STORAGE VAULT	14	
SITE 300	OSM5	HE WASTE STORAGE MAGAZINE	52	
SITE 300	OSM51	HE STORAGE MAGAZINE	52	
SITE 300	OSM52	MAGAZINE-STORAGE VAULT	28	
SITE 300	OSM58	STORAGE MAGAZINE	51	
SITE 300	OSM7	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM70	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM71	MAGAZINE-STORAGE VAULT	52	
SITE 300	OSM72	MAGAZINE-STORAGE VAULT	52	
SITE 300	OSM8	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM80	M80 READY VAULT	54	
SITE 300	OSM817C	HE STORAGE MAGAZINE	54	
SITE 300	OSM82	MAGAZINE - STORAGE	52	
SITE 300	OSM83	M83 READY VAULT	57	
SITE 300	OSM832B	EXPLOSIVES STORAGE	54	
SITE 300	OSM832D	HE SHIPPING AND RECEIVING	54	
SITE 300	OSM834M	HE STORAGE	28	
SITE 300	OSM854H	MAGAZINE STORAGE	50	
SITE 300	OSM854V	STORAGE	28	
SITE 300	OSM857	MAGAZINE STORAGE VAULT	26	
SITE 300	OSV822AD	CONTRL MTLS-STRG VAULT	45	
MAIN SITE	U011	ERD TREATMNT FAC A	23	
MAIN SITE	U042	ERD TREATMNT FAC B	22	
MAIN SITE	U119	TELCOM NODE #11	69	
MAIN SITE	U172	TELCOM NODE #12	24	
MAIN SITE	U187	ERD TREATMNT FAC	18	

MAIN SITE	U193	SEWER DIVERSION FAC	21	
MAIN SITE	U271T	MICROWAVE TOWER	23	
MAIN SITE	U283	TELCOM NODE #3	24	
MAIN SITE	U291	LCW STATION	41	
MAIN SITE	U295	PUMP HOUSE	48	
MAIN SITE	U299	TELCOM NODE #4	24	
MAIN SITE	U313A	TELCOM NODE #10	24	
MAIN SITE	U313B	HC EMRGCY COMM RADIO CTR	20	
MAIN SITE	U325	LCW CONTROL	52	
MAIN SITE	U328C	PE/LCW CONTROL BLDG	35	
MAIN SITE	U416	BOILER FACILITY	26	
MAIN SITE	U424	ELECTRICAL SUBSTATION	58	
MAIN SITE	U430	TELCOM NODE #9	24	
MAIN SITE	U448	TELCOM NODE #8	24	
MAIN SITE	U470	TELCOM NODE #2	24	
MAIN SITE	U472	ERD TREATMENT FAC D	17	
MAIN SITE	U599	TELCOM NODES 5&6	24	
MAIN SITE	U6042	MOCHO POT PUMP STA HH	58	
MAIN SITE	U6047	SANDIA WTR TNKS CNTRL STATN	52	
MAIN SITE	U664	TELCOM NODE #7	24	
SITE 300	U815	CNTRL AIR PLANT/STRG	54	
SITE 300	U842	INSTAL COMM HUT#1	24	
SITE 300	U844	CW BOOSTER STATION #1	52	
SITE 300	U846	ELECTRICAL SUBSTATION	52	
SITE 300	U847	CW BOOSTER STATION #2	52	
SITE 300	U849	COMM RADIO TRANS	52	
SITE 300	U849A	COMM RADIO TWR CNTRL BLDG	24	
SITE 300	U849B	COMM TWR GENERATOR BLDG	51	
SITE 300	U849C	COMM RADIO TWR CNTRL BLDG	9	
SITE 300	U853	CW BOOSTER STATION #3	52	
SITE 300	U865D	ELECTRICAL SUBSTATION	29	
SITE 300	U866	INSTAL COMM HUT #2	24	
SITE 300	U882T	S300 MICROWAVE TOWER	23	
SITE 300	U887	WELL 20 POTBL WATER WELL	21	
SITE 300	U888	WELL 18 POTBL WATER WELL	32	

Appendix II. LLNL Properties Turning 50 since 2007 Report

Site	Asset ID	Facility Name	Facility Age	Gross Sq Ft
MAIN SITE	116	G.S	53	7,781
MAIN SITE	121	PLS OFFICE	56	90,759
MAIN SITE	123	AUDITORIUM	53	7,742
MAIN SITE	125	WEST CAFETERIA	52	12,513
MAIN SITE	131	ENGINEERING	52	285,308
SITE 300	15WST	WATER STORAGE TANKS - 11	52	
MAIN SITE	162	RESEARCH/CRYSTAL GTH	51	19,042
MAIN SITE	165	OPTICS/DEVELOPMENT LAB	53	10,053
MAIN SITE	166	DEVELOPMENT LAB	51	13,226
MAIN SITE	173	PLS WELD SHOP	54	413
MAIN SITE	174	PLS	54	19,437
MAIN SITE	176	PLS SHOP	54	3,973
MAIN SITE	194	PLS	53	41,543
MAIN SITE	233	MATERIALS MANAGEMENT	51	4,933
MAIN SITE	241	VACANT	51	54,369
MAIN SITE	243	VACANT	52	20,000
MAIN SITE	251	VACANT	55	31,128
MAIN SITE	253	HC DEPT OFFICES & LABS	52	30,932
MAIN SITE	254	HC BIO ASSAY LAB	51	2,488
MAIN SITE	262	G.S	53	10,882
MAIN SITE	280	VACANT	55	5,469
MAIN SITE	281	LABORATORY	55	18,505
MAIN SITE	312	IMF MANAGED FACILITY	55	11,482
MAIN SITE	321A	MATERIALS FAB SHOP	56	59,515
MAIN SITE	321B	MATERIALS FAB SHOP	56	7,511
MAIN SITE	321C	MATERIALS FAB SHOP	56	78,335
MAIN SITE	321D	EE FABRICATION	56	2,106
MAIN SITE	321E	MMED BOILER ROOM	56	2,581
MAIN SITE	323	EMERGENCY SERVICES / FIRE STATION#1	52	18,555
MAIN SITE	324	EMERGENCY SERVICES / ALARMS OFFICE	52	10,181
MAIN SITE	327	RADIOGRAPHY	52	19,100
MAIN SITE	331	TRITIUM FACILITY	52	30,484
MAIN SITE	332	PU FACILITY	51	104,787
MAIN SITE	343	IMF MANAGED OFFICE/LAB FACILITY	51	27,368
MAIN SITE	411	SHIPPING/RECEIVING	55	71,625
MAIN SITE	418	MUSD PAINT SHOP	53	12,167

MAIN SITE	435	VACANT	51	57,724
MAIN SITE	436	PLS SHIPPING/RECEIVING/STORAGE	55	9,745
MAIN SITE	443	VACANT	50	8,953
MAIN SITE	444	VACANT	55	805
MAIN SITE	446	VACANT	51	1,743
MAIN SITE	519A	HEAVY EQUIPMENT STORAGE	55	594
SITE 300	802A	VACANT	56	3,264
SITE 300	803	EPD/ORAD STRG WRHS	54	1,719
SITE 300	804	STAGING AREA	53	107
SITE 300	805	INERT MACHNG/EXPLVS WST PACKNG	54	6,830
SITE 300	806A	HE MACHINING	54	3,417
SITE 300	806B	HE MACHINING	54	4,088
SITE 300	806C	MACHINING STORAGE	54	640
SITE 300	806D	MACHINING STORAGE	52	192
SITE 300	807	HE MACHINING	51	1,575
SITE 300	809A	HE PRESSING	52	2,570
SITE 300	811	VACANT	52	1,081
SITE 300	812A	VACANT	51	2,656
SITE 300	813	CHANGE HOUSE	54	2,870
SITE 300	817A	HE PRESSING CONTROL ROOM	54	417
SITE 300	817B	HE PRESSING CELL	54	639
SITE 300	817D	HE PRESSING STORAGE	54	207
SITE 300	817F	HE PRESSING OVENS	54	526
SITE 300	817G	HE PRESSING BOILERS	54	237
SITE 300	817H	HE PRESSING INERT STORAGE	54	890
SITE 300	819	PE/STORAGE-C&M SHOPS	50	828
SITE 300	821	CHEMISTRY STORAGE	50	650
SITE 300	825	CHEM PROCESS FACILITY	52	1,370
SITE 300	826	CHEM PROCESS FACILITY	50	1,638
SITE 300	830	VACANT	54	1,764
SITE 300	832A	STORAGE	54	540
SITE 300	832C	STORAGE	54	335
SITE 300	833	EPD/ERD SERVICE-R&D	52	1,892
SITE 300	8340	EPD/ERD SRVC-MNTRNG TF834	50	282
SITE 300	834A	THERMAL TEST FACILITY	51	1,694
SITE 300	834B	VACANT	51	751
SITE 300	834C	VACANT	51	751
SITE 300	834D	VACANT	51	1,694
SITE 300	834E	VACANT	51	998
SITE 300	834F	VACANT	51	649
SITE 300	834G	VACANT	51	527

SITE 300	834H	THERMAL TEST FACILITY	51	998
SITE 300	834K	PUMP STATION	50	545
SITE 300	835	EPD/ERD STORAGE	50	1,216
SITE 300	841	PE/STORAGE - C&M SHOPS	52	1,786
SITE 300	845A	EXPL WASTE TREATMNT FAC	56	431
SITE 300	850	VACANT	51	5,095
SITE 300	851A	FIRING FACILITY	51	12,996
SITE 300	851B	MACHINE SHOP	51	985
SITE 300	854A	VACANT	52	2,458
SITE 300	855A	HE MACHINING	52	667
SITE 300	855B	HE MACHINING	52	637
SITE 300	855C	HE MACHINING	50	612
SITE 300	856	VACANT	51	1,613
SITE 300	859	STORAGE	52	1,500
SITE 300	870	OFFICE FACILITY	53	4,000
SITE 300	871	ADMINISTRATION	53	7,928
SITE 300	872	PE/PAINT SHOP	56	1,887
SITE 300	873	PE/C&M SHOPS	53	17,452
SITE 300	874	MECHANICAL SHOPS	52	19,972
SITE 300	875	PE/SUPPLY & MAINTENANCE	51	15,171
SITE 300	876	STORES & RECLAMATION	51	2,400
SITE 300	877	COMPUTER TECHL SUPPORT	50	3,352
SITE 300	895	EPD/ORAD OFFICE	51	380
MAIN SITE	OS518	GAS CYLINDER DOCK	52	
SITE 300	OS812B	VACANT	55	
SITE 300	OS812C	VACANT	55	
SITE 300	OS858B	DROP TOWER - VACANT	51	
SITE 300	OS897	WEST CONTROL POST	52	
SITE 300	OS898	WEST OBSERVATION POST	52	
SITE 300	OSM2	HE WASTE STORAGE MAGAZINE	55	
SITE 300	OSM21	MAGAZINE-STORAGE VAULT	56	
SITE 300	OSM22	MAGAZINE-STORAGE VAULT	56	
SITE 300	OSM23	MAGAZINE - STORAGE VAULT	56	
SITE 300	OSM24	MAGAZINE-STORAGE VAULT	52	
SITE 300	OSM3	HE WASTE STORAGE MAGAZINE	55	
SITE 300	OSM30	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM31	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM32	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM33	HE STORAGE MAGAZINE	52	
SITE 300	OSM34	MAGAZINE-HE CUBCL STRGE	52	
SITE 300	OSM4	HE WASTE STORAGE MAGAZINE	55	

SITE 300	OSM5	HE WASTE STORAGE MAGAZINE	52	
SITE 300	OSM51	HE STORAGE MAGAZINE	52	
SITE 300	OSM58	STORAGE MAGAZINE	51	
SITE 300	OSM7	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM70	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM71	MAGAZINE-STORAGE VAULT	52	
SITE 300	OSM72	MAGAZINE-STORAGE VAULT	52	
SITE 300	OSM8	MAGAZINE-STORAGE VAULT	55	
SITE 300	OSM80	M80 READY VAULT	54	
SITE 300	OSM817C	HE STORAGE MAGAZINE	54	
SITE 300	OSM82	MAGAZINE - STORAGE	52	
SITE 300	OSM832B	EXPLOSIVES STORAGE	54	
SITE 300	OSM832D	HE SHIPPING AND RECEIVING	54	
SITE 300	OSM854H	MAGAZINE STORAGE	50	
MAIN SITE	U325	LCW CONTROL	52	
MAIN SITE	U6047	SANDIA WTR TNKS CNTRL STATN	52	
SITE 300	U815	CNTRL AIR PLANT/STRG	54	
SITE 300	U844	CW BOOSTER STATION #1	52	
SITE 300	U846	ELECTRICAL SUBSTATION	52	
SITE 300	U847	CW BOOSTER STATION #2	52	
SITE 300	U849	COMM RADIO TRANS	52	
SITE 300	U849B	COMM TWR GENERATOR BLDG	51	
SITE 300	U853	CW BOOSTER STATION #3	52	

Appendix III. Site 300 Building 810 Complex Assessment

DESCRIPTION

The Building 810 complex is part of the original Site 300 Process Area constructed between 1957 and 1968 and located in the southern part of LLNL's Site 300. The 2005 site survey and historic building assessment recommended that the Process Area and Chemistry Area be considered a non-contiguous historic district encompassing Building 805, 806A, 806B, 807, 817A, 817B, 817F, 825, 826, 827A, and 827C. Buildings 810A, 810B, and 810C were inadvertently omitted from the assessment and recommendation at that time. This assessment intends to rectify that oversight and make a recommendation regarding the Building 810 complex.

The Building 810 complex consists of three buildings, Building 810A (**Figure 21**), Building 810B (**Figure 22**), and Building 810C (**Figure 23**). Completed in 1959, Building 810A was originally designated as Building 810; it became Building 810A when 810B and 810C were built in 1982.

Building 810A is two structures on a shared concrete slab foundation. The northern, two-story structure contains three assembly bays or cells while the smaller, one-story, southern structure houses support activities (an office, utility room, restroom, and shop). The roof of the smaller, southern structure extends to the front of the taller, northern structure, forming a roof over the walkway between the two building elements and connecting them as one building. Buildings 810A and 810B are steel-framed, concrete buildings. 810A's roof is frangible above the assembly bays. 810C is concrete block with a concrete roof that slants down from north to south.

Figure 20. Building 810A, south (front) and east sides, showing both structures, 2010

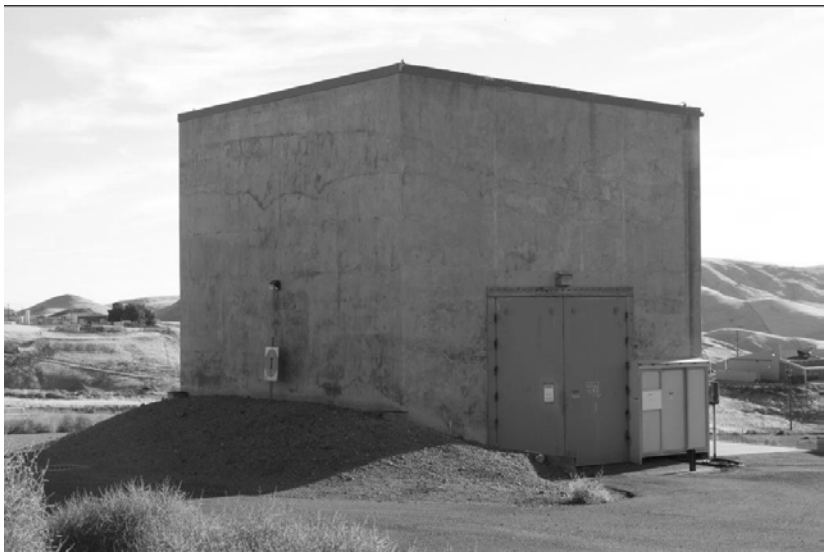

Figure 21. Building 810B, south and east sides, 2010

Figure 22. Building 810C, north side, 2010

MISSION HISTORY

In 1955, LLNL obtained the initial piece of land that formed Site 300. It later purchased additional land; Site 300 is currently 7,000 acres. One of the earliest functions moved to the site was the High Explosive (HE) Process Area, which had the focused assignment of developing and fabricating HE for LLNL's nuclear weapons designs. The HE Process Area started in 1957 with a few buildings (Building 805 and the Building 806 Complex), but expanded over the succeeding decade, placing individual elements of the process into specific complexes or buildings.

Building 810, completed in 1959, housed assembly activities. It retained that mission throughout its history. When Buildings 810B and 810C were built in 1982, they served as an additional assembly building and staging facility, respectively. While Building 810 was renamed Building 810A, its mission did not change.

CONSTRUCTION HISTORY

Rogers Engineering Co., Inc., of San Francisco completed drawings for Building 810 in 1958 as part of the Phase III construction site plan for the Process Area. They completed construction on the two structures in 1959[1].

The main (north) section of Building 810 houses a repair room, a high explosives storage vault, and three assembly cells with double steel doors providing entry to each cell on the north side

[1] "Site Plan, Bldg's 304, 304B, 304C, 307, 308, 310, 316, 324 & 325, Process Area, Site Plan," 1958, PS257-810-002 JA, LLNL Plant Engineering Library.

(**Figure 23**). The south side of the cells show ventilation louvers and insulated cement asbestos panels. A concrete loading dock slopes down from the walkway on the east end of the structure.[2]

Figure 23. North side of Building 810A, showing assembly cell doors, 2010

The south structure of Building 810A is also concrete. The concrete roof overhang forms a ceiling for the passageway between the two structures. This portion of the building originally housed an adhesive preparation room, an office, a utility room, a restroom, and inert storage.

LLNL's Plant Engineering redesigned the office area in 1974, removing the wall between the original office and the adhesive preparation room and relocating the equipment from the latter to the repair room in the building's north section.[3]

In 1982, two additional buildings were located at the Building 810 site. Building 810B served as a fourth assembly bay. The steel-framed, poured concrete building houses a single room, with concrete beams and ceiling on a concrete floor slab. It has a built-up roof over insulation over concrete. The interior houses an assembly pit and a bridge crane.[4] The building has undergone no renovations since its original construction.

Building 810C is a staging facility, providing temporary storage for items in transit. Like the other Process Area facilities, the building is concrete, in this case 8-inch concrete block for the walls. It rests on a finished concrete slab and has two-leaf metal service doors. The built-up

[2] "Architectural Plan, Section, Elevations & Details, Building 310, Process Area," 1958, PS247-810-003JA, LLNL Plant Engineering Library.
[3] "Bldg. 810 Office Expansion," 1974, PSA-74-810-001C, LLNL Plant Engineering Library.
[4] "Site 300 Assembly Bay No. 4, Bldg. 810B, Plans, Section Elevations and Details," 1982, PSA82-810-202D, LLNL Plant Engineering Library.

insulated roof with metal fascia rests on pre-cast concrete planks and slants down from north to south.[5] The building has undergone no renovations since its original construction.

INTEGRITY

All three buildings in the Building 810 Complex retain integrity for the HE Process Area's period of significance. The only change to their design was the expansion of the office area in Building 810A in 1974. This was a minor change to the interior layout and did not have a negative impact on the building's design or materials. The building retains integrity.

RECOMMENDATION

This report recommends that Building 810A be considered a contributing element to the LLNL Process Area and Chemistry Area Historic District, the period of significance of which is 1957-1991. The 2005 assessment considered the Process Area and Chemistry Area eligible for National Register consideration under Criterion A, association with a historic event or pattern of events. The Process Area and Chemistry Area's specific contributions were to LLNL's HE work in nuclear weapons design during the Cold War.

Buildings 810B and 810C do not appear to be contributing elements to the Process Area and Chemistry Area Historic District. Built in 1982, they contributed little to LLNL's overall Cold War high explosive development and fabrication efforts. While they retain integrity for their original period of construction, they are too young to be part of the district.

As with the other elements of the HE Process Area Historic District, Building 810A housed a distinct and essential function within the overall high explosive development process. The overall HE process activities contributed to LLNL's Cold War activities; the assembly activities housed in Building 810A were part of that overall process.

Building 810A retains integrity for the period of significance and should be added to the set of buildings forming the Process Area and Chemistry Area Historic District.

[5] "Site 300 Staging Facility, Bldg. 810, Plans, Sections, Elevations and Details," 1982, PSA82-810-301D, LLNL Plant Engineering Library.

Appendix IV. Acronyms

AMS	accelerator mass spectrometry
ASC	Accelerated Strategic Computing
ASCI	Accelerated Strategic Computing Initiative
ATA	Advanced Test Accelerator
CAMS	Center for Accelerator Mass Spectrometry
DHS	Department of Homeland Security
DOE	U.S. Department of Energy
Draft PA	Draft Programmatic Agreement
GOCO	Government-Owned, Contractor-Operated
HE	high explosive(s)
ICF	inertial confinement fusion
LIFE	Laser Inertial Fusion Engine
LLNL	Lawrence Livermore National Laboratory
LLNS	Lawrence Livermore National Security, LLC
LPTR	Livermore Pool-Type Reactor
LSO	Livermore Site Office
NAI	Nonproliferation, Arms Control, and International Security Directorate
NAS	Naval Air Station
NIF	National Ignition Facility
NNSA	National Nuclear Security Administration
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Officer
SSP	Stockpile Stewardship Program