4. 0 COLD WAR NRHP-ELIGIBLE HISTORIC PROPERTY MANAGEMENT METHODS

This section describes the methods for the conduct of CRM studies regarding Cold War properties at SRS.

4.1 Records and Reports

Cold War resource records and reports generated in the management of SRS Cold War resources will be filed with the contractor responsible for Cold War Historic Preservation who will maintain a Cold War History Record and Report System. This system will contain all CRM reports, hard bound and on CD, annual review forms, and correspondence concerning Savannah River's Cold War NRHP-eligible properties arranged by month and year. Historical narratives and documentation produced as submittals to the SHPO for compliance purposes will be produced in triplicate by the contractor responsible for Cold War Historic Preservation for submission to DOE, SHPO, and Site Archives.

The contractor responsible for Cold War Historic Preservation will work in cooperation with Site Records managers, DOE and the contractor responsible for Cold War Historic Preservation, to facilitate creating a permanent record group to be housed at the Site Archives. A duplicate set of the CRM records will be created for this repository annually, ensuring that the records will be secure despite job turnovers, etc.

4.1.1 Cold War Resource Records

At least six types of CRM records will be generated or archived at SRS for Cold War resources. Where possible, site building numbers will be used to catalog records.

- *Architectural Survey Forms* - The form used for architectural survey is shown as Figure 4. It is a customized version of the SC state survey form that reflects the industrial nature of the site and was accepted by SHPO.

- *Database* - This form is generated from a Microsoft Access database that will be used for CRM management of the Cold War resources.

- *Photography* – Photographic documentation at the site is typically handled by site photographers and maintained by the Site's Photo Services. However, all photographic documentation generated from mitigations will be maintained permanently as part of the separate record group created for cultural resource records and will be archivally stored at the Site Archives. The documentation will be stored in a facility that meets 36 CFR 79 standards. Documentation will be organized by building number but the SC survey number will also be included.

- *Annual reports, updated plans, etc* – These reports, etc. will be archived as hardbound copies and on CD. They will be filed annually.

- *Research notes from study projects*. Notes from research projects will be filed by building number and then by date of completion.

- *Classified Documentation/Sensitive Documentation* – The handling of these materials will be conducted using established directives on such materials.

4.1.2 Cold War Resource Reports

4.1.2.1 Standardized Report Outline

A standardized report outline on Cold War resources is not needed for this five-year plan period, as the *SRS Context and Inventory* will serve as the main report for the Cold War building stock. However, if a supplemental document is needed it will follow the guidelines for research and preparation of a survey report as outlined in the *Survey Manual South Carolina Statewide Survey of Historic Properties* (2002).

If a building has been missed or new information warrants a building's inclusion, the standardized format shown in Figure 4 may be used to capture new information about facilities or to edit existing information within the architectural database and a new form can then be generated.

If a mitigation is required that stipulates a HABS/HAER documentation will be completed and a level of documentation is specified, then the preservation professional involved will follow the guidelines set by the National Park Service for HABS/HAER documentation for photography, narratives, citations, etc. See the *Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation: HABS/HAER Standards* (1990). (See Section 6, Appendix I).

4.1.2.2 Report Library

SR is responsible for storing and distributing CRM reports concerning Cold War resources. SR will require electronic versions of all CRM reports in PDF format that can be web posted if there are no safeguards and security issues with their distribution. Hardbound copies may be donated to Georgia and South Carolina's major research institutions, archives, and local libraries, the SRNL Technical Library, and the DOE Reading Room at USC-Aiken Library. If there are safeguard and security concerns, the SR will be responsible for the review of such material at five-year increments to revisit the possibility of their release and to distribute the reports accordingly. It is suggested that this review be conducted in tandem with the updating of the CRMP.

4.2 Inventory

4.2.1 Archival Searches

Professional research methods will be employed for all research. Notes will be taken and sources noted. Archival records at SRS include an excellent collection of twentieth-century black and white photography that shows the establishment and growth of the site, the construction and engineering histories written by Du Pont historians detailing the SRS story as well as other sites within the complex, "Plant Histories" written annually, excellent collections of engineering drawings, architectural drawings, equipment arrangements, a site newspaper published from 1952 onward, news clippings books, etc. W.P. Bebbington's *History of Du Pont At Savannah River Site* published in 1990 is also an excellent source for technological information[9]. Reed et al. *Savannah River Site at Fifty* (2002) also covers the site's history.[10] There are two sets of historical records at

[9] William P. Bebbington, *History of Du Pont at the Savannah River Plant* (Wilmington, Delaware: E.I. du Pont Nemours and Company, 1990).
[10] Mary Beth Reed, Mark Swanson, Steven Gaither, J. W. Joseph and William R. Henry, *Savannah River Site at Fifty* (Government Printing Office, 2002).

SRS: DOE (ERDA, AEC) records as well as the records of the prime contractor (Du Pont and WSRC). Both need to be reviewed for a comprehensive view of the site.

Archival research off-site can and may be conducted at state universities in South Carolina and Georgia, local libraries, state archives, etc. depending on the focus of the research. The National Archives and the Library of Congress have salient materials, as does DOE Headquarters in Germantown, MD. The Hagley Museum and Library in Delaware has Du Pont's Atomic Energy Records, a large and significant collection spanning the firm's work at Oak Ridge to Savannah River. University of South Carolina-Aiken has a Government Documents Department and collects SRS materials. Clemson University has the Strom Thurmond Papers, Jimmy Byrnes Papers and the Edgar Brown Papers; all three collections contain SRS-related materials.

4.2.2 Ethnographic Fieldwork

This section refers to audio taped oral history interviews on Cold War history. All oral historical interviews will be conducted using the "Principles and Standards of the Oral History Association" published in the *Oral History Evaluation Guidelines, Oral History Association, Pamphlet Number 3*, adopted 1989. A manual with guidelines and release forms was prepared for specific use in the SR Oral History Study in 1999, titled *I Made History in this Building, Oral History Guidelines and Releases Savannah River Site History Project.* This booklet, which provides step-by step guidance in addition to release and restriction forms, is included in Section 6, Appendix H.

4.2.3 Structure and Facility Surveys

The methods for survey in the state of South Carolina are provided in the *Survey Manual South Carolina Statewide Survey of Historic Properties* (2002) which defines a survey as the "process of systematically identifying historic properties within the boundaries of a specific geographical area, documenting their location and physical characteristics, and evaluating their importance within an appropriate historical context." Surveyors are required to complete a SC Statewide Survey form that details a resource's name, use, address/location, use, construction date, a property description, summary of historical data, architect if known, site plan, and photographic information. The property's NRHP eligibility is also to be noted. Each property receives a unique survey number that is provided on request from the State Survey coordinator. The survey manual gives complete instructions on survey methodology, photographic requirements, data organization, photo log examples, and professional standards and qualifications for consultants. Survey forms can be submitted electronically in two formats, a Microsoft Access database and as Microsoft Word documents.

As noted earlier, the 2003 SRS Cold War inventory was completed using a Microsoft Access database. It was created based on the state form but it has been modified to better capture the industrial character of SRS's Cold War resources.

4.2.3.1 Evaluating Significance

4.2.3.1.1 SRS Context and Associated Themes

To evaluate a Cold War resource's significance, a historical context, based on primary and secondary research, was needed to inform evaluators of what was important in the period or place under study. The creation of a Cold War context for SRS was an important tool in understanding the overall history of the site. The context developed two overarching themes: the site's Cold War production mission and its contribution to peaceful uses of atomic energy including the Transplutonium Programs, the discovery of the free neutrino, the production of plutonium–238 for heat sources and the production of heavy water for research purposes. Key historic sub themes that linked identified resources to these themes were developed. Research identified the following

sub themes as important to an understanding of SRS's history and its buildings: research and development, fuel and target fabrication, heavy-water production and rework, reactor operations, chemical operations and waste management, Cold War landscape (its layout), safety and security, and site administration and support. The development of these themes formed the foundation for the building evaluations and those resources that were linked to the production-related themes, the Site layout, and research and development were considered to have more significance than those related to safety and security or administration. Evaluators then applied the National Register of Historic Places Criteria for Evaluation described below.

4.2.3.1.2 National Register Criteria

The National Register of Historic Places is a collective listing of those districts, sites, buildings, structures, and objects significant in our nation's prehistory and history. These properties represent our shared local, state, and national experience. The Secretary of the Interior has set minimum qualification standards that must be achieved for a property to be listed in or determined eligible for listing in the National Register of Historic Places. These criteria are defined in 36 CFR 60, *National Register of Historic Places* and are interpreted in *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* (NPS 1991):

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That has yielded, or may be likely to yield, information important in prehistory or history.

To qualify for the National Register, a property should represent a significant part of the history, archeology, engineering, or culture of an area, and it must have the characteristics that make it a good representative of properties associated with that aspect of the past. The property must meet one of the National Register Criteria for evaluation by:

- Being associated with an important context and;

- Retaining historic integrity of those features necessary to convey its significance.

The methods described in 36 CFR 60, *National Register of Historic Places and are interpreted in National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* (NPS 1991) were followed to evaluate the SRS Cold War District.

After identification and research, it has categorized the property as a district.

SR has completed a historic context that establishes that the site, its buildings, structures and layout constitute a unique cultural landscape that possesses historical significance on a national, state and local level in the areas of engineering, military, industry, and social history.

SR has recommended the SRS Cold War District as eligible under Criteria A for its role in the production of nuclear materials for our nation's defense during the Cold War; Criteria C (a) as it embodies best practice principles of nuclear design and safety when constructed; (b) was completed by the work of a master in that Du Pont was the designer of the facility, a firm that had unique corporate culture, management skills, adherence to flexible design and deep atomic energy experience, having constructed the X-10 reactor at Oak Ridge and Hanford during WWII; (c) methods of construction; and Criteria D for its potential to yield information in history.

As the majority of resources has reached 50 years of age or will within the next two years, Criteria Consideration G was not used under the Cold War context. This Criteria Consideration is applied when a property achieves significance in the last 50 years due to its exceptional importance. It may apply to SRS facilities that post date 1989 in their startup and are not associated with the Cold War context and possess exceptional importance on the national level of significance. The Defense Waste Processing Facility, which started up in the 1990s to vitrify high level wastes, is an example of such a property. Other candidates may exist in Tritium and in SRNL.

NRHP evaluations were performed along with resurveying NRHP-eligible properties and conducting walkthroughs to determine if the recommended eligible properties retain integrity.

To be eligible for the National Register, a property must meet the National Register criteria, and it must have integrity. Integrity is the ability of a property to convey its significance. A historic property has a high degree of integrity when it retains its historic appearance and character, enabling it to convey a strong feeling for the period in history when it achieved significance. Seven qualities are involved when evaluating a property's integrity: location, design, setting, materials, workmanship, feeling, and association. A property with good integrity will possess some or most of these aspects. Establishing which are most important to a particular property requires knowing why, where, and when the property is significant.

Location - the place where the historic property was constructed or the place where the historic event occurred. The actual location of an historic property, complemented by its setting, is particularly important aspect in recapturing the sense of historic events and persons.

Design- the combination of elements that create the form, plan, space, structure, and style of a property. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. A property's design reflects historic functions and technologies as well as aesthetics.

Setting - the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historic role. It involves how, not just where, the property is situated and its relationship to surrounding features and open spaces.

Materials - the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form an historic property. A property must retain the key exterior materials dating from the period of significance. If the property has been rehabilitated, the historic materials and significant features must have been preserved.

Workmanship - the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site.

Workmanship is important because it can furnish evidence of the technology of a craft, illustrate the aesthetic principals of an historic or prehistoric period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principals.

Feeling - the property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.

Association - the direct link between an important historic event or person and an historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer.

Using the framework of the historic themes and the NRHP criteria, an evaluative strategy was defined to identify levels of significance and integrity for the SRS Cold War NRHP-eligible historic properties that reflected the Sites' Cold War defense mission and its non-defense Atoms for Peace programs. To evaluate the selected buildings, each building was visited by an architectural historian/historian and notes were taken on the presence or absence of equipment, preservation of historic fabric, presence of modifications or remodeling and to what extent the building was remodeled. Evaluators were familiar through historical research with original equipment arrangements and historic interior photography and were able to identify key physical features that had to be intact and visible. In addition, a knowledgeable guide who had worked in the facility was present to address questions on how the facility functioned historically, its current use, the dates of alterations or modifications, and if those changes were adverse or consonant with the site's technological mission. The guide also identified others knowledgeable about different periods within the facility's operational history as further information sources.

Essentially, this walk through was conducted to ascertain to what degree the Cold War NRHP-eligible historic properties possess the seven qualities noted above. If there were multiple examples of a building type, evaluators sought to establish through comparison which of the type had the most integrity. For example, the five areas within a SRS reactor: the personnel area, the assembly area, the process area, the disassembly area, and the purification area were compared and contrasted to establish which reactor or which reactor "area" retained integrity, given their structural differences. In each reactor, the evaluators traced the production steps from where the raw materials entered the building in the assembly area through its preparation in casks for shipment to the canyons. In other cases, evaluators identified only wings or areas within significant buildings that had excellent integrity and that may be recorded such as the radiological contamination examination rooms in 719-A that were outfitted with unique equipment to handle a medical emergency that involved severe radiation. The remainder of 719-A's interior has been totally remodeled and is not considered to have integrity. Fieldwork for the interior evaluations is still ongoing. The preliminary results of the walk-throughs are shown in Table 3 and these rankings on integrity and significance form the basis for a mitigation strategy outlined below.

4.3 Structure and Facility Management

An important component of future management of Cold War NRHP-eligible historic properties at SRS is the education of SRS managers and personnel about historic preservation concerns and the integration of these concerns into future decision making and planning that may involve SRS Cold War historic properties.

The SR Manager has formally communicated with the contractor responsible for Cold War Historic Preservation's President concerning the PA and CRMP and SR's expectations of compliance. This communication creates an environment in which the education of structure and facility managers about preservation concerns for NRHP-eligible facilities they steward will occur.

For operational Cold War NRHP-eligible historic properties, the CRMP is the primary reference document. Information from it will also be added to the facility manager's training manual and an electronic version of the CRMP posted on SHRINE so that managers have easy access to the plan and can become familiar with the CRMP guidelines that define how historic properties are to be treated in terms of their current use as an operational facility. As facility manager positions are not static, this training is critical to successful preservation planning at SRS.

The management options for Cold War NRHP-eligible historic properties are as follows:

- The facility continues in operational use but is used sympathetically with no alterations to its historic character. See Section 4.4.2 below on Programmatic Exclusions. No further treatment necessary.

- The facility is no longer in operational use but is retained in place on standby, or placed in safe storage mode, or mothballed for future use. See Section 4.4.2 below on Programmatic Exclusions if no alterations are planned. If alterations that impact the historic character of the property will occur, see Section 5.1.

- The facility is selected for preservation for future interpretation of the site's Cold War missions and has a specific treatment plan for its management and use. See Section 4.3.1.

- The facility continues in use but is upgraded in a manner that constitutes an adverse effect to the historic character of the facility. See Section 5.1.

- The facility is adaptively reused with an unsympathetic function. If the proposed action will have an adverse effect on a Cold War NRHP-eligible historic property, see Section 5.1.

- The facility is selected for deactivation and decommissioning activities (see below). If the proposed D&D action will have an adverse effect on a Cold War NRHP-eligible historic property, see Section 5.1.

As SR is actively involved with reducing the building footprint of the Site, managers and individuals involved in selecting facilities for D&D activities will be made aware of the preservation parameters involved when a significant historic property is selected for D&D. The NHPA requires that Federal agencies avoid impacts to historic properties under their care and encourages that all avenues will be pursued to preserve, reuse and/or readapt the historic property for future use. At a minimum, decision makers need to be informed concerning the significance and integrity of the historic properties within the Cold War NRHP-eligible historic district and provided recommendations upon which better decisions can be made for D&D selections as well as future planning for the D&D of the Site's canyons and reactors that involves the potential for long-range future exterior interpretation.

Section 4.4.2 (see below) outlines the Programmatic Exclusions (maintenance and other activities) that are considered exempt from the need for review and that can proceed after consultation with the CRMP.

4.3.1 Structure and Facility Documentation

Methods used to document Cold War NRHP-eligible historic properties will vary with the significance and integrity of the property, which will be determined after completion of the field assessment. In order to assess the significance and integrity of the NRHP-eligible buildings, each

was assigned a level of significance and a ranking for its interior integrity (see Section 3.3.4.1, Table 4). Cold War NRHP-eligible historic properties that have been deemed of highest significance (1) and have excellent or good integrity (1) or (2) are candidates for **Historic American Engineering Record** (HAER) documentation studies **or Historical Documentation** studies or **Baseline Recordation Studies**.

Evaluation of the historical significance and integrity of each Cold War NRHP-eligible property is ongoing. The exterior and interior evaluations were conducted by a historian that met the Secretary of Interior's Standards and was knowledgeable about the site's history in tandem with knowledgeable individuals that had worked in the facility as well as the current facility manager. In particular, the team sought to identify interiors, equipment, and artifacts that met the evaluative criteria defined in Section 3 and to assess the integrity of each. The team was also informed about hazards and radiation concerns that were associated with the inspected facility.

4.3.1.1 HAER Documentation

HAER documentation consists of measured drawings depicting existing or historic conditions; or select existing drawings photographed with large-format negatives, perspective-corrected photographs with large-format negatives of current exterior and interior views and photocopies with large format negatives of historic views where available, and full written history and description. The methods to be used and the production of the documentation package must follow the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documents.[11] HAER documentation projects typically include a historian, architectural historian, and photographer. All involved must meet the Secretary of the Interior's professional standards. See Appendix I in Section 6, Volume Two.

The level of documentation appropriate for a specific building or structure is determined by the National Park Service but the existence of complete and well preserved sets of as-built engineering drawings and historic views archived at SRS suggests that Level II HAER standards would be appropriate. The documentation will reflect all events, features, and values that qualify the property for listing in the National Register. Photographs and negatives must be archivally processed and printed on non- resin-coated paper and safety film, respectively. All materials must be specifically prepared for durability over a 500-year period including the narrative that is printed on acid free paper.

The National Park Service assigns the documentation a unique number and prepares its submission to the Library of Congress where it is available to the public for education and research. The Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) collections are among most used collections in the Prints and Photographs Division of the Library of Congress. The collections document achievements in architecture, engineering, and design in the United States. Administered since 1933 through cooperative agreements with the National Park Service, the Library of Congress, and the private sector, ongoing programs of the National Park Service have recorded America's built environment in multiformat surveys comprising more than 350,000 measured drawings, large-format photographs, and written histories for more than 35,000 historic structures and sites dating from Pre-Columbian times to the twentieth century. An on-line presentation of the HABS/HAER collections has been created that includes digitized images of measured drawings, black-and-white photographs, color transparencies, photo captions, data pages including written histories, and

[11] HABS/HAER Standards originally published in the Federal Register, Vol. 48, No. 190, (Thursday, September 29, 1983) pp.44730-34.

supplemental materials.[12] This presentation ensures that a broad range of the public can use the documentation.

HABS/HAER submissions for the southeast region are sent to the US Department of the Interior, National Park Service, Southeast Regional Office, Atlanta Federal Center, 1924 Building, 100 Alabama ST, S.W., Atlanta, GA 30303.

4.3.1.2 Historical Documentation/Thematic Studies

Historical Documentation, an alternate documentation strategy for significant resources, provides "a detailed record of the significance of a property for research and interpretive purposes and for conservation of information in cases of threatened property destruction."[13] But, unlike HABS/HAER documentation, requirements are negotiated between the Federal agency and the SHPO to better tailor the effort to the resource and make use of available primary and secondary sources. In this sense, historical documentation offers greater flexibility in meeting specific preservation objectives.[14] This same flexibility allows for documentations that can be used or adapted for use in education and for public outreach.

> [Historical] Documentation is a detailed record, in the form of a report or other written document, of the historic context(s) and significance of a property. Historical research to create documentation uses archival materials, oral history techniques, ethno histories, prior research contained in secondary sources and other sources to make a detailed record of previously identified values or to investigate particular questions about the established significance of a property or properties...Documentation generally results in both greater factual knowledge about the specific property and its values, and in better understanding of the property in its historical context.[15]

As noted, historical documentation of this caliber would involve a comparable level of effort demanded in a HABS/HAER narrative and the same professional standards for the historian, architectural historian, and photographer. An example of this documentation approach would be a thematic study of a significant building type such as the reactor or a process area. Savannah River has five heavy-water moderated and cooled production reactors all of which are considered to be of the highest significance but with varying degrees of integrity. A HABS/HAER documentation approach for each would involve creating documentation portfolios for each reactor. Conversely, the thematic approach allows the historian to create a single narrative emphasizing the overall reactor process at Savannah River, showing what each reactor shared in the production of nuclear materials, showing how each differs as a consequence of product demand and modifications to meet that demand, the milestones reached in each, etc. The methods used in this type of documentation can be generally stated as adhering to professional methods and standards used by professional historians. Oral history guidelines are given in Section 6, Appendix H.

The thematic approach will be used for the documentation of SRS Cold War NRHP-eligible historic properties using the major themes developed for the context as a thorough yet cost effective manner of preserving the information within the historic process areas. SRS's Cold War History is a complex topic as a number of processes were involved in its production mission. A thematic approach allows more thorough exploration of one process and the people, buildings, and equipment that were part of it. In addition it parallels the large scale D&D effort that has taken an

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[12] HABS/HAER Collections, National Park Service website, viewed on July 6, 2004 see http://memory.loc.gov/ammem/hhhtml/hhhome.html
[13] Hanford Sitewide Treatment Plan as quoted from NPS:1983, p.44728.
[14] Ibid.
[15] Ibid.

"area" approach. D-Area is synonymous with heavy water production; M-Area with fuel and target production. C-, P-, R-, L-, and K-Areas are solely associated with reactor operations. F-and H-Areas are associated with chemical separations; H-Area has a secondary process association with tritium production. Areas that had a mixed use include A-Area that functioned primarily as an administration and support center. However, SRNL (SRTC) is geographically part of A-Area but is functionally separate as a center for research and development. Table 6 gives a listing of planned thematic studies and gives the building areas involved and the associated Cold War NRHP historic properties associated with each theme.

Table 6. Thematic Studies

Theme	Area (s)	Some Associated Historic Properties
Heavy Water Production/Rework	D	420-2D, 420-D, 421-2D, 421-D, 451-D, 483-2D, 483-3D, 483, 484, 485, 614-1, 683, 701 –1, 2, 3; 704, 717, 772
Fuel and Target Fabrication	M	305-A, 313-M, 320-M, 321-M, 322-M, 701-1, 3; 704-M, 710-2M
Reactor Operations – Cold War production and special isotopes programs	C, K, L, P, and R	106, 107; 109, 110, 2; 151-1,2; 183, 2, 4; 184, 185,186, 188-R, 190, 706
Chemical Separations	F, H	211-2, 3F; H including stacks and auxiliary structures; 222-F, 232-1H, 238-H, 240-F, 241-11F, 241-18F, 241-1F, 241-20F, 241-28 F, H; 241-34H, 241-F, 242-16F, 242-1H, 242-F, H; 242-16H; 244-H, 251-F, H; 260-1F, 260-4H, 281-1F, 281-2H, 281-4F, 281-5F, 5H; 281-6F, 281-8H, 282-F, H; 284-F, H; 285-F, H; 288-H, 292-1F, 292-F, 294-1F, 1H; 294-F, H; 298-H; 614-F, 704-F, H; 706-H 709-F, 717-F, 723-F, 724-H, 772-F
Tritium Extraction	H	232-F and stack, 232-H and stack, 236-H
Pilot Plants/Research and Development	T	678-T, 679-T
Research and Development	A	723-A, 735-A, 736-A, Main laboratory and its auxiliaries, 774-A, 776-1A, 2A, 3A, 4A; 777-10A, 786-A, 792-A, 794-A, 770-U
Administration/Support/Safety/Security	A	614-1A, 701 A and G facilities, 702-A, 703-A, 708-A, 709-A, 710-A, 713-A, 714-A, 716-A, 717-A, 719-A, 720-A, 661-G
Infrastructure – Power, Utilities, Water Supply, Railroad, Military	G	751-1A, 784-A, 785-A, 608-G, 616-G, 618-G, 681-1G, 681-2G, 681-3G, 681-6G

Thematic studies will be based upon primary documents, and will present architectural and engineering "as builts" and subsequent plans showing modifications if possible. Historic photography will be used to illustrate process and show the workplace(s) involved. The narrative will fully describe the process, the building area, and the process equipment so that the thematic

study and the information gathered can be used later for interpretation and to help guide evaluations of significance for any artifacts found or associated process equipment.

Thematic studies will be conducted when major process buildings within an area/theme are affected by an undertaking as well as its associated support facilities. For example, a reactor operations study would begin when any of the five 105 buildings are adversely affected by an undertaking such as the proposed grouting of the disassembly basins. The study would involve all five-reactor areas and all reactor buildings and the thematic study would provide documentation regardless of whether they were operational or non-operational. For the operational facility, baseline data would be gathered showing current use. For the D&D candidate reactors, the documentation would show its character and appearance in its end state.

When a single or unique Cold War NRHP-eligible historic property is subject to an undertaking, a facility specific historical documentation study of that facility can be undertaken using the research methods outlined above. A facility-specific historical documentation study approach will be undertaken when a facility's historical significance warrants such a treatment and where schedule and cost effectiveness is an issue. An example would be 777-10A, the Physics Laboratory, which is considered to be highly significant and is in an excellent state of preservation. A facility history specific to this building and its Cold War mission given its unique character and mission with a brief overview that provides context for the facility within the site's research and development facilities during the Cold War is an appropriate documentation treatment.

4.3.1.3 Baseline Recordation Studies

As SR/SRSO has identified highly significant Cold War NRHP-eligible historic properties that are operational, that will continue to be operational, and that embody highly technical and scientific processes some classified, a third approach should be taken (for example, the Cold War NRHP-eligible Tritium Facility historic properties). It is recognized that the technological nature of these facilities does not engender preservation; such facilities are continually improved or changed to further the site's mission. Moreover, the research and processes involved may be restricted from the public and radiological concerns may be an issue. Despite these parameters, historic preservation concerns need to be embedded into the management of these highly technological properties so that what is historically significant about the facility can be preserved for the future.

Preservation through documentation has and will be used in which baseline photographic recordation is completed that documents the characteristics that make the facility historically significant. The photographic record would be kept as a permanent site record that would be added to over time so that future researchers and the American public can learn about the property and its historic role in the Cold War. If the facility contains classified information, the photographic documentation can be completed by properly cleared personnel in the contractor responsible for Cold War Historic Preservation's Site Photographic Services and the film developed using appropriate sources, and the resulting documentation, which would be labeled, archivally stored, and accompanied by a photo log, can be placed in a permanent record file within classified file records. A historian that meets the Secretary of the Interior's standards will be involved in the selection of views and the compilation of the documentation file. The photographic standards given in Section 4.3.1.6 apply to this type of documentation. Digital imaging can only be used to complement the required documentation photography.

A historic narrative based on primary data and oral history will be completed using the same guidelines given under Section 4.3.1.2 for Thematic Studies if the Cold War NRHP-eligible property to be documented contains information that is not classified.

If the facility contains information that is classified, the historian working with a knowledgeable individual will identify key primary documents or document types that need to be preserved in a research file that will be kept as part of the Site's permanent records so that a future historian will be able to develop a narrative history when the security restrictions are no longer in place or are relaxed. Such documents will include at a minimum the Du Pont Construction records, "as built" architectural and engineering drawings, later drawings that show process change and changes in the facility, historic views and maps, oral histories with key personnel, Knowledge Preservation projects, videos and safety films, and operations manuals. However, if a part of the history of the facility or a phase of its process history can be isolated, researched and written for public release, SR will consider the completion of that history.

4.3.1.4 Historic Structures Report

Historic Structures Report can be completed where one facility is the subject of an undertaking. The report will contain an introduction, description of the undertaking and its effect on the historic property, a history of the facility, a current architectural description and structural evaluation and recommendations for restoration, reconstruction, and/or rehabilitation and accompanying cost estimates.

4.3.1.5 Photographic Documentation

HAER, Historical Documentation and Baseline Recordation Studies will include photographic documentation that will involve large-format photography, medium format photography and 35 mm black and white photography. All photographic recordation must be complete prior to the start of D&D.

- *Large-format photography*

  HAER documentation will require large format photography and the methods involved are spelled out in the HAER guidelines. The views selected for documentation must show what is significant about the Cold War NRHP-eligible historic property, its setting or physical context, oblique and planar views of the main elevations and any details. Interior views will show the current state of the property, how space was used, and any architectural details. If a property has preserved-in-place equipment or machinery that was significant to the process history of the property and or site, it will be fully documented with large format photography and a flow chart drawn that shows the production line. Large-format photography may also be selected for non-HAER documentation when a significant property or equipment is considered to be adversely affected by an undertaking. The photographer and historian will work as a team with the historian establishing the views and their order. The standards for processing, labeling, etc are given in the *Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documents: HABS/HAER Standards* (1990). Both types of documentations, HAER and non-HAER, will follow these guidelines for processing and negative and contact print storage and labeling.

- *Medium-format photography*

  This type of photography will only be used for resource of highest significance (Ranking of 1) where space requirements do not allow the use of a large format camera or if safety concerns dictate the use of a smaller camera. Same guidelines for large format photography are applicable.

• *35 mm black and white photography*

Cold War NRHP-eligible historic properties of lesser significance (significance ranking of 2 or 3 and integrity ranking of 2 or 3) will be documented through black and white 35 mm photography, both exterior and interior, with representative interior views. The following guidelines should be used:

1- The exterior of individual properties will be recorded by at least one photograph of the main façade, with oblique views and other elevations if necessary.

2- The interiors of the buildings will be recorded with photos showing the representative use of space.

3- Acceptable print sizes are 3 1/2" x 5" and 4" x 6". The back of each photograph will be labeled with an indelible ink pen.

4- Prints and negatives will be submitted in archival storage sleeves.

5- An inventory sheet will be compiled to identify all prints and should correlate with the roll and frame number of the negatives.

Cold War NRHP-eligible historic properties of lesser significance with poor integrity (4) will follow the above guidelines but only the building exterior will be documented. If the exterior photography from the survey level is completed, no more exterior photography is needed.

4.4. Cold War NRHP- eligible Historic Property Maintenance

This section outlines the maintenance and other activities that are considered programmatic exclusions from the need for review and that may proceed after consultation with the CRMP. Each category of activity listed below, from routine maintenance to security upgrades in facilities and to equipment that are considered historically significant will not involve replacement or alterations that will change the appearance of the building or equipment. A separate treatment plan for the C-Area Historic District is given in Section 4.7.

4.4.1. Routine maintenance and repair activities to Cold War NRHP-eligible historic properties excluding C-Area Historic District

Programmatic exclusions for routine maintenance and repair include, but are not limited to:

- HVAC system components
- Landscaping, lawn sprinklers
- Signs
- Electrical distribution and lighting systems
- Steam, condensate, chill water, and RO/DI systems
- Nitrogen, carbon dioxide, liquid nitrogen, argon, and compressed air systems
- Drain systems
- Repainting
- Ductwork repair
- Fire suppression systems
- Fencing
- Communication systems
- Utility piping
- Guardrails/barriers
- Roof repair – in kind
- Concrete flooring/topping
- Production and non-production equipment

4.4.2 Plant rearrangement and/or building modifications that do not require alterations to the historic character of the facility/equipment including, but not limited to:

Office upgrades or rearrangements
Factory equipment rearrangements
Furnishings installations/replacement
Telephone installation
Computer cabling
Flooring, including carpeting or vinyl tile
New HVAC systems
Electrical distribution systems
Plant utility piping relocation/installation

4.4.3 Replacement in-kind where replacement materials match the original materials in configuration, size, detail, and color.

4.4.4 Purchased services contracts that do not impact the environment, or human health or safety including, but not limited to:

Architectural/engineering services
Non-destructive and destructive testing of production materials
Production engineering evaluation
Environmental monitoring, sample collection, and laboratory analysis
Equipment maintenance and repair (support, production, computer, laboratory and office equipment, etc.
Communication equipment installation and repair
Waste transportation and disposal for existing waste streams
Calibration services
Data processing/key punch services
Pest control

4.4.5 Safeguard and Security routine activities with the exception of training activities or activities that put the Cold War NRHP-eligible historic property at risk.

4.4.6 Installation or repair of security and personnel safety systems including, but not limited to:

Public Address systems
Fire alarms, fire detection equipment, and fire suppression equipment
Computer security systems
Monitoring, detection, and surveillance equipment
Security or emergency notification alarm systems
Emergency exit lighting systems
Emergency eyewash systems
Railings, shields, and guards

4.4.7 Activities associated with Post Cold War buildings and structures

All activities/actions in or associated with buildings and structures constructed since the end of the Cold War or that have gone into operation since the Cold War (in 1990) except for those properties built since that time that have been determined eligible for inclusion in the National Register because of their Exceptional Importance under Criteria Consideration G are exempt.

4.4.8. Asbestos Abatement Activities with the exception of Transite ™ Exterior Siding and Transite ™ interior wall panels

These include actions that remove or fix asbestos for safety and health concerns. Such activities include lagging, insulation, painting, pipe and ductwork, and non-historic panel removal. None of these activities shall cause structural modification or alter character-defining features in identified Cold War NRHP-eligible historic properties.

The majority of Cold War NRHP-eligible properties are clad in Transite ™ a short fiber cement-asbestos siding material and Transite™ was also used for interior partition walls. The removal of original Transite Panels, the original building cladding and/or interior wall fabric is considered non-exempt.

4.4.9 Transition Activities

Transition activities entail the deactivation of unneeded plant systems that are not required to maintain facilities in an environmentally safe and secure condition in anticipation of eventual decontamination and decommissioning of the facility. See below for a list of typical transition activities. These activities are sometimes undertaken by the contractor's operations force rather than D&D personnel and have occurred in the past without benefit of preservation guidelines. With the CRMP in place, the facility manager or D&D manager responsible for the transition phase will consult with the CRMP prior to the beginning of transition activities to ascertain if the chosen transition actions may pose an adverse effect on the Cold War NRHP-eligible historic property. If the proposed action is identified as a programmatic exclusion then the transition activity can occur. If the proposed action will pose an adverse effect, the facility manager or D&D managers will reconsider the action to avoid impacting the Cold War NRHP-eligible historic property, or, if that is not feasible, defer the actions until after the preferred mitigation treatment has been undertaken. All photographic documentation will occur before electricity is cut off for lighting.

The primary plant systems within facilities that may be deactivated include, but are not limited to, electrical; heating, ventilation, and air conditioning (HVAC); utilities; instrumentation and control (I&C); and vessels and process/waste piping systems. Specific measures include:

- decontaminate areas (wash down, wipe down, flushing, vacuum blast, etc.);
- stabilize contaminated areas (fixatives, painting, sealants, etc.);
- drain or empty piping or vessels (Note: a tank is considered a vessel);
- flush piping and vessels;
- plug, cap, or blank ductwork, piping, and vessel nozzles;
- stabilize, consolidate, or remove outside contaminated areas adjacent to facilities;

- decontamination, stabilization, or removal of glove boxes and fume hoods;
- remove, reuse, or recycle non-hazardous and hazardous materials;
- remove and transport hazardous and radioactive waste to appropriate storage locations or to burial grounds;
- remove fencing and paved parking areas adjacent to a facility;
- seal facility penetrations and repair roofing;
- excavate for isolation of underground piping to and from facility;
- test, sample, and monitor in and around deactivated facilities;
- winterize equipment and the facility for freeze protection;
- minimize or eliminate plant operating systems (e.g., electrical, HVAC, utility, I&C, vessels and process/waste piping); and
- install electrical, monitoring, and utility services to facility to maintain, if appropriate, essential system operation.

4.5 Cold War NRHP-eligible Historic Property Mitigation

This section presents mitigation strategies for Cold War NRHP-eligible historic properties that will be adversely impacted by an SRS undertaking. In their report *Balancing Historic Preservation Needs with the Operations of Highly Technical or Scientific Facilities* submitted to the U.S. House of Representatives, the ACHP concluded that communication among preservationists should:

> ...aim (to establish) a consensus about what kinds of facilities and objects should be physically preserved for the future. This would include deciding how the historic value of facilities and objects should be determined, and which of these could be "preserved" through documentation.[16]

In order to achieve this consensus, DOE has consulted with the SHPO and the Advisory Council for Historic Preservation in the development of this document and the PA. DOE has also considered the views of the public in carrying out the terms of this agreement in a manner consistent with the requirements of 36 CFR Part 800. DOE has consulted with individuals and organizations who have identified themselves as interested parties, regarding the effects which may result from demolition, substantial alteration, or deterioration of Cold War NRHP-eligible historic properties that are eligible for listing in the National Register, or issues of concern pertinent to such properties. As a result of public comment, the following became consulting parties to the PA and CRMP: the Savannah River Site Citizens Advisory Board (SRS CAB), the Citizens for Nuclear Technology Awareness (CNTA), and the Cities of Augusta, Georgia; and Aiken and New Ellenton in South Carolina.

DOE has taken the concerns of these groups into consideration during implementation of the PA and the development of this document. Public comment was also sought through notification

[16] Advisory Council on Historic Preservation, *Balancing Historic Preservation Needs with the Operations of Highly Technical or Scientific Facilities* 1991a, p. xi.

letters followed by focus group meetings to discuss the historical effort and to receive public comment. The two-hour in length workshops were held on Tuesday, July 8, 2003 at the North Augusta Community Center, 1010 Brookside Drive, North Augusta, SC and Thursday, July 10, 2003, at the Adam's Mark Hotel, 1200 Hampton Street, Columbia, SC. Comments were also received by mail. The public comment period began on June 23 and ended July 23, 2003.

The public interest in preserving buildings and artifacts was underscored at these meetings. Public response to mitigation options in the public meetings emphasized the need to document buildings prior to D&D. The need to fully document significant buildings and structures prior to their destruction was strongly cited by the public in the public meetings as important. Also, public access to reports that contain historical documentation was deemed important to the public. In response, SR will place copies of the PA documentation in DOE's public reading rooms of the notifications sent to SHPO regarding proposed activities. The SRS CAB and the CNTA will be formally advised concurrent with SHPO notification. DOE, after consultation with SHPO, will hold public workshops on future undertakings, when warranted.

Individual(s) that meet the Secretary of Interior's professional standards in history and architectural history will conduct the tasks outlined below.

4.5.1. Documentation Mitigation Challenges

Documentation mitigation involving photography must occur before the facility is cold and dark for lighting.

When a confined space, controlled area, or contaminated area is to be documented, the contract historian, in consultation with the photographers and facility managers, will exercise judgment on the type of photographic documentation to be used, always choosing the most archival method of documentation available. Where contamination issues eliminate the possibility of large format photography, other avenues of documentation will be pursued including digital photography or three-dimensional laser scanning to produce the highest resolution views possible.

Photography in confined spaces requires a permit and training. The permit will be sought after these conditions are noted on the walk through evaluation. Staff photographers with the contractor responsible for Cold War Historic Preservation are fully trained for work in confined spaces and in certain radiologically contaminated areas. Again, these conditions will be noted on the walk-throughs and a plan devised to meet the safety and health concerns and to document as fully as possible the physical qualities that make the facility historically significant.

4.5.2 Mitigation Plan for Adverse Impact to Site Layout

The Site's original layout is considered to contribute to the District's National Register eligibility. The reconfiguration of the site, that will eliminate the historically significant D, M, and T areas, will adversely impact the original site layout. To mitigate this adverse effect, DOE will archive and preserve historic maps, photographs, documents, and construction histories that show the layout and the decision-making processes involved in its making. The extent of the documentary record to be preserved was determined by a historian with input from knowledgeable SRS retirees as suggested from public comments. If these materials are designated for deposit at the National Archives, or are currently on deposit at a facility or library that meets the standards of 38 CFR 79 in the facility requirements and in the specified professional standards, this is satisfied.

The Federal Government has ownership of all federal record/document collections. The National Archives has the authority to select what will be accessioned into their repository. If the National Archives does not elect to accession all of these materials into their repository and determines that the public interest will be served, the Agency (in this case, DOE) may propose transfer of records

for disposal to be donated. Or, if the Government retains custody of the collection, they may be loaned to the State, a museum, or another entity for curation. Either of these scenarios has to be approved by the Archivist.

SR will consider the possibility of establishing a cooperative working relationship with the South Carolina Department of Archives and History, the South Caroliniana Library, the SRS Heritage Center and the Aiken County Historical Museum for the deposit of such historical documentary materials if records are available for donation or loan.

If the listed items cannot be released off site due to sensitivity, then the original materials will be archived on site in a manner consistent with archival standards outlined in 36CFR79.

In addition a set of these documents will be retained on site for their research value. Site Archives currently creates high-resolution copies of technical archival material and it is suggested that the collection be so treated at no risk to the original documents to create a research collection for use within the proposed SRS interpretive center.

The suggested documents to be preserved are as follows:

1- All construction and engineering and design histories associated with the planning and construction of the site including but not limited to compilation histories completed by Du Pont, Voorhees, Walker, Foley and Smith, Girdler, American Machine and Foundry, Gibbs & Hill, The Lummus Company, Blaw-Knox, and New York Shipbuilding.

2- All planning and construction era maps and a sampling of site layout maps that show the original layout and its evolution for the period of significance: 1950-1989. This would include early boundary maps (Nos. 3303, 3304, etc), early topographic maps, maps that show planning issues, area maps, military maps and drawings for military gun sites, etc., as well as general maps that show transitions in building development and area expansions.

3- Preservation of two oversize wall mounted relief maps, "*Savannah River Plant,*" Models completed by Panoramic Studios, Philadelphia (Not Dated) (Scale 1 inch=200 feet vertical; 1inch=2,000 feet horizontal). (There are two examples. One was displayed in conference room in 703-A; it is currently in storage in B Area. The second is also stored)

4- Historic photography from 1950s, including historic aerial photography, showing transformation of landscape through the establishment of the site, roughly 1950 through 1965. The construction era photographic series with the prefix "M" is particularly important.

5- The photographs, appraisals, and plats of real estate properties acquired by the AEC within the site boundary and that are shown in the Office of the Chief of Engineers Real Estate Tract Register prepared for the Real Estate Savannah River Operations U.S. Atomic Energy Commission in 1952.

6- AEC manuals such as the "Back Up Manual," AEC press releases, folios or presentation pieces used to orient workforce, Du Pont "Fact Books," and other documents of this nature.

7- Plat books showing "government programmed housing" used to locate incoming labor force, any materials related to construction era housing including trailer parks, men's dormitories, etc.

8- Savannah River Plant Histories from their inception through 1989. These include but are not limited to:

DPSP-53-368	All Areas	8/50-6/53
DPSP-54-448	All Areas	7/53-6/54
DPSP-55-454-1	Reactor Areas	7/54-12/72
DPSP-55-454-2	Separations Areas	7/54-12/72
DPSP-55-454-3	Raw Materials Areas	7/54-12/72
DPSP-55-454-4	GS Area	7/54-12/72
DPSP-73-1001	GS Area Supplement	7/54-12/72
DPSP-55-454-5	Plantwide Activities	7/54-12/72
DPSPWD-58-60	Tritium Separation	1/57-12/72
DPSP-SP-74-454	Special Projects	1/73-12/75
DPSPWD-74-74	Tritium Separation and Packaging	1/73-12/87
DPSP-77-454-1	Reactor Areas	1/76-12/87
DPSP-77-454-3	Raw Materials Area	1/76-12/87
DPSP-81-454-6	Waste Management Programs	1/79-12/87
DPSP-88-454-8	Plantwide Activities	1/87-12/87

9- Savannah River Plant newspapers published under all banners from 1952 through 1989.

4.5.3 Mitigation Plan for Cold War NRHP-eligible historic properties with the highest level of significance (1) and excellent or good integrity (1, 2). (See Table 4)

See discussion on significance and integrity in Section 3.3.4.1.

Cold War NRHP-eligible historic properties with the highest level of significance (1) and integrity (1, 2) are: 105-R, P, L, K and C (includes the associated stacks, engine houses and any other directly physically related building); F and H and their auxiliary buildings (A and B lines) including the stacks; SRNL and its auxiliaries; 777-10A; 717-F; 232-H and stack; and 234-H and stack. Cold War NRHP-eligible historic properties, 678-T and 703-A, are treated under a separate MOA (see Section 6, Appendix D).

SR, after consultation with the SHPO and the consulting parties, has elected to document their Cold War NRHP-eligible historic properties with the highest level of significance (1) and integrity (1, 2) through thematic studies based on the major themes discussed in Section 4.3.1.2. The baseline recordation approach has been selected for NRHP-eligible properties with the highest level of significance (1) and integrity (1, 2) that are currently used by operations, that will experience technological changes, and that contain sensitive or classified information. The HAER Level II study remains an option where SR chooses to fully document an individual Cold War NRHP-eligible historic property and to make that documentation available through the Library of Congress.

If an undertaking will pose an adverse effect to these Cold War NRHP-eligible historic properties, the mitigation options are:

(1) a *HAER Level II study* prepared for submission to the National Park Service (narrative and large-format photography); or

(2) a comparable standard for *Historic Documentation/Thematic Study* and large-format photography for submission to the SC Department of Archives and History; or

(3) or a comparable standard for *Baseline Recordation Studies* that will be archived on site.

Each approach, described below, involves two efforts: the compilation of a historical narrative based on primary sources and oral history and photographic documentation.

A *HAER Level II study* can be used for the documentation of single resources that are individually significant on a national level and that contain information that is not sensitive. 777-10A, the Physics Laboratory, is a candidate for this mitigation option given its national significance, its uniqueness, and its excellent state of preservation. This facility is scheduled for full D&D in 2005 and while some large elements of the test reactors may be preserved, the facility will be fully documented to HAER standards prior to any dismantlement. 717-F, the Mock up Building, will also be considered for this mitigation option for the same reasons if the building and specifically the mock up canyon cell it contains prior to any D&D activities. 717-F is currently in operation.

The documentation will contain large format photography (see below), photocopied measured drawings, and a written narrative of the resource's history and description based on primary sources to the greatest extent possible and will include an assessment of the reliability and limitations of the sources. Citations will be properly footnoted and a methodology will be included. A full description of the specific methods involved in preparing a HAER Level II documentation that meets HAER standards is given in Appendix L. The National Park Service Southeast Region office is to be consulted concerning the documentation level and the overall endeavor if this mitigation option is selected.

or

Historic Documentation/*Thematic Study* – This option will be used where there are recurring building types or where the desired goal is to document a process or theme rather than a building. This approach will document the Cold War NRHP-eligible historic properties in SRS's five reactor areas and two chemical separations areas. Thematic studies based on reactor operations or chemical separations will be completed in which whole process building areas (for reactors R, P, K, L, and C for separations F and H) will be treated in one documentation that contains a full description of all associated historic buildings in the area that were part of the process flow regardless of their current operational status. The best-preserved building or structure type will be chosen for full documentation with large-format photography (see photography requirements below).

Documentation of the Cold War NRHP-eligible historic properties associated with tritium extraction will involve 232-H and to some extent using documentary sources its demolished counterpart, 232-F. The documentation will show the tritium extraction process and its change over time and will entail a description and information about the first SRS tritium building demolished in 1997. 232-H operated from the 1955 through the 1990s and although the extraction process was reinvented over time it contains significant information about this important part of the Site's Cold War mission.

Original as-built drawings, maps, oral history and historic photography will be gathered and used to interpret the resources. The documentation will contain large-format photography, as-built drawings printed on archival bond paper from high resolution scans, and a written narrative of the resource's history and description based on primary sources to the greatest extent possible and will include an assessment of the reliability and limitations of the sources. Citations will be properly footnoted and a methodology section will be included. When there is more than one highly significant resource to be documented in a thematic study, representative photographs of all properties involved will be taken to compare/contrast how the like Cold War NRHP-eligible historic properties differ. When a thematic study that covers duplicated resource types or thematic studies of process areas are completed and accepted by the SHPO, SR will have completed its compliance requirements for all like building/process areas or resource types.

The documentation will be archivally produced in triplicate for delivery to the SC Department of Archives and History, the Site Archives, and the CRM Cold War Records file. An electronic copy of the narrative report will be made available for distribution.

or

Baseline Recordation Studies will document the characteristics that make the facility historically significant through photography and a historical narrative. This approach will be used for Cold War NRHP-eligible historic properties such as 717-F, 773-A and its auxiliary facilities, all Tritium facilities and any other highly technical significant Cold War NRHP-eligible historic property that is in operation.

The documentation photography will be large format. The photographic record will be kept as a permanent site record. If the facility contains classified information, the photographic documentation can be completed by properly cleared personnel in Site Photographic Services and the film developed using appropriate sources, and the resulting documentation, which would be labeled, archivally stored, and accompanied by a photo log, can be placed in a permanent record file within classified file records. The photographic standards for properties of high significance are given below. A historian that meets the Secretary of the Interior's standards will be involved in the selection of views and the compilation of the documentation file. Digital imaging can only be used to complement the required documentation photography.

A historic narrative based on primary data and oral history will be completed using the same guidelines for Thematic Studies if the Cold War NRHP-eligible property to be documented contains information that is not classified.

If the facility contains information that is classified, the historian working with a knowledgeable individual will identify key primary documents or document types that need to be preserved in a research file that will be kept as part of the Site's permanent records so that a future historian will be able to develop a narrative history when the security restrictions are no longer in place or are relaxed. Such documents will include at a minimum the Du Pont Construction records, "as built" architectural and engineering drawings, later drawings that show process change and changes in the facility, historic views and maps, oral histories with key personnel, Knowledge Preservation projects, videos and safety films, and operations manuals. However, if a part of the history of the facility or a phase of its process history can be isolated, researched and written for public release, SR will consider the completion of that history. For example, a treatment of early tritium production as opposed to an overall history of production of tritium might be possible.

Large Format Photography - This involves the use of large format cameras that produce 4"x 5", 5" x 7", or 8"x 10" negatives with black and white film. Three prints must accompany each negative. Both negatives and prints need to be archivally treated and the contact paper used will be fiber-based instead of resin coated. The paper and negatives should be prepared according to HABS/HAER guidelines to ensure stability and to achieve the desired "lifetime" of 500 years. All photography will be properly developed, labeled, organized, captioned, and stored in an archival manner. Photo logs and photo keys will accompany photography. This threshold is standard for all HABS/HAER photography and this standard will be used for Historical Documentation/Thematic studies and Baseline Recordation studies that involve NRHP-eligible resources with the highest level of significance (1) and excellent or good integrity (1, 2). Significant historic equipment will be photographed using these standards.

Oral history interviews with knowledgeable SRS retirees will be undertaken using the guidelines of the Oral History Association to obtain first hand accounts of the Site's Cold War history. Guidelines have been created for SRS as well as release forms. These are provided in Section 6, Appendix H. The interviews will be audio taped and videotaped when possible. The oral history interviews are considered critical to this mitigation plan. The number of interviews will vary

given the topic but the number may range from three to ten oral histories. Stakeholders such as the CNTA and SRS CAB and current SRS staff will identify knowledgeable retirees who can impart information about the site's Cold War mission and workplace as well as current employees.

The interviews will highlight the technical processes that marked the Site's production history: reactor processes, separation processes, and research and development as well as the Cold War workplace. Heavy-water production and fuel and target production has been handled under a separate Memorandum of Agreement. Each audio taped interview will be transcribed and copies distributed to DOE-Headquarter historians and to the public. The transcribed interviews could be placed on a SRS preservation website. If historic documentaries created by Site personnel are identified that show a process area at a historically important time, the preservation and public distribution of the documentary film can replace one oral history.

4.5.4 Mitigation plan for Cold War NRHP-eligible historic properties with a lesser level of significance (2) within the SRS Cold War Historic District and excellent or good integrity (1 and 2). See discussion on significance and integrity in Section 3.3.4.1 and Table 4.

The Cold War NRHP-eligible historic properties to be documented under this approach are those considered to have a level of significance (2) and a level of integrity (1 and 2). Mitigation for these will vary with the closeness of their association to a historical significant process, their size, and integrity. The end or current state of these Cold War NRHP-eligible historic properties will be documented through photography and a historic context will be provided for each within an appropriate thematic study. Where a recurring facility type is involved, only one will be photographically documented. Historic views, engineering drawings (as builts) and oral history will be used in the historical narratives to show the historical role of these facilities within the Site's Cold War mission.

Exterior large-format photography will be used for Cold War NRHP-eligible historic properties such a canyon sand filter, an important auxiliary of the canyons or the reactor basins, a like auxiliary in its importance, plus both facility types are monumental in size and architecture. One example of the site's monumental pump houses and powerhouses, its substations, etc will also be documented with large format photography. As noted if they are duplicated types built from a single standardized design, a single documentation of the best-preserved example of each type will suffice for the mitigation of the remainder of the type.

Interior large format photography will be used to document historic interiors or installed equipment that were noted during walk-throughs when an undertaking is proposed that may adversely affect the intact interior. For example, the intact 1950s era contamination treatment room in 719-A is candidate; however only the contamination treatment room falls under this mitigation plan. The remainder of the building has been severely altered. 305-A, 751-1A, the river pump houses are other examples. As field evaluation continues, other "rooms" or "areas" in historic facilities, where there is excellent preservation of significant historic interiors, may be cited for this level of documentation for future research and for public outreach and interpretation.

The remaining support buildings will be documented through black and white 35 mm photography, both exterior and interior, with representative interior views.

The following guidelines will be used:

1- The exterior of individual Cold War NRHP-eligible historic properties will be recorded by at least one photograph of the main façade, with oblique views and other elevations if necessary.

2- The interiors of the buildings should be recorded with photos showing the representative use of space.

3- Acceptable print sizes are 3 1/2" x 5" and 4" x 6". The back of each photograph will be labeled with an indelible ink pen.

4- Prints and negatives will be submitted in archival storage sleeves.

5- An inventory sheet will be compiled to identify all prints and should correlate with the roll and frame number of the negatives.

4.5.5 Mitigation plan for NRHP-eligible resources of significance (3) within the SRS Cold War Historic District and all levels of integrity

This mitigation is intended to capture the end or current state of these resources through photography and to provide a historic context for each within an appropriate thematic study. The properties to be documented under this approach will be those considered to have a level of significance (3) and a level of integrity (1, 2, and 3).

Historic views, engineering drawings (as builts) and oral history will be used in the historical narratives to show the historical role of these facilities.

Support buildings or contributing members of the district with poor integrity will be documented through black and white 35 mm photography, both exterior and interior, with representative interior views.

The following guidelines will be used:

1- The exterior of individual Cold War NRHP-eligible historic properties will be recorded by at least one photograph of the main façade, with oblique views and other elevations if necessary.

2- The interiors of the buildings will be recorded with photos showing the representative use of space.

3- Acceptable print sizes are 3 1/2" x 5" and 4" x 6". The back of each photograph will be labeled with an indelible ink pen.

4- Prints and negatives will be submitted in archival storage sleeves.

5- An inventory sheet will be compiled to identify all prints and should correlate with the roll and frame number of the negatives.

NRHP-eligible resources of lesser significance with poor integrity (4) will follow the above guidelines but only the building exterior will be documented.

Digital Photography - There has been discussion of considering the potential of a "pilot" project using digital photography to record these Cold War NRHP-eligible historic properties. The ACHP has indicated an interest in this effort. Contact was made with the National Park Service (NPS) to ascertain whether a pilot program of this nature was already under consideration by the NPS' HABS/HAER program. It is our understanding after contacting the SE NPS Regional Office that the current HAER photographic standards outlined above are still in place and that the digital

alternative will not be considered due to the fact that the products generated and the media it is placed upon is not archivally stable to the threshold required.

While digital imaging may not be archivally stable and thus is not suitable for documentation purposes, its use will be considered for public outreach and interpretation uses. Also, where safety conditions warrant, digital photography may be used (see Section 4.5.1).

4.5.6 Heritage Tourism and Public Outreach

4.5.6.1 Heritage Tourism Team

SR has organized a team comprised of the PA's Consulting Parties to focus on Cold War Heritage Tourism and develop a vision statement that will then be used to develop a comprehensive program for public involvement, outreach, and education. Given this agenda, representatives from SR Office of External Affairs (OEA) as well as the contractor responsible for Cold War Historic Preservation's Office of Public Affairs (OPA) are invited to the team meetings. Other parties including state heritage tourism professionals may also be included as needed as the team evolves into a working organization. SR hosted the first meeting of the Heritage Tourism Team in September 2004; the Heritage Tourism Team will meet at least four times annually.

All team participants will be familiar with the President's Executive Order 13287 "Preserve America" (2003) that provides the following guidelines.

> "Where consistent with agency missions and governing law, and where appropriate, agencies shall use historic properties in their ownership in conjunction with State, tribal, and local tourism programs to foster viable economic partnerships, including, but not limited to, cooperation and coordination with tourism officials and others with interests in the properties."
>
> "Each agency shall ensure that the management of historic properties in its ownership is conducted in a manner that promotes the long-term preservation and use of those properties as Federal assets and, where consistent with agency missions, governing law, and the nature of the properties, contributes to the local community and its economy."
>
> "Where consistent with agency missions and the Secretary of the Interior's Standards for Archeology and Historic Preservation, and where appropriate, agencies shall cooperate with communities to increase opportunities for public benefit from, and access to, Federally owned historic properties."

The premise was that Team members would become active participants within heritage tourism within the state and region potentially:

- through established programs like the South Carolina Heritage Corridor Program, developed through public and agency involvement, that focus on existing heritage resources with 14 counties in western South Carolina that comprise the corridor and encourages economic development, strengthens visitorship, and conserves the historic, cultural and natural resources within the corridor (SRS is in Region 3 of the corridor)[17]; or

[17] Wilbur Smith Associates, *Environmental Assessment of the South Carolina Heritage Corridor Plan, Volume I,* Prepared for the U.S. Department of the Interior National Park Service and South Carolina Department of Parks, Recreation and Tourism, June 2003, 2.

- through the establishment of new partnerships with other sites in the DOE complex particularly Oak Ridge National Laboratory that have a shared history in atomic energy development and that may attract a similar tourist market; or

- through other avenues of involvement.

The PA further stipulated activities that will be part of the public outreach program to be developed under the auspices of the Heritage Tourism Team or on a parallel basis. These are outlined in the following sections.

4.5.6.2 SRS Heritage Center

Public input has focused the SRS Cold War heritage tourism effort on the establishment of a museum/visitor center/library center to interpret the Site's Cold War history through artifacts, oral history, historical photography, and preserved Cold War historic properties as well as its pre-federal history. SR will work with CNTA or its successor organization to establish the SRS Heritage Center to promote heritage tourism. This will occur within the framework of the Heritage Tourism Team of which both SR and CNTA are members with DOE acting as the lead. Plans for the center and prospects for funding are in the planning stage.

CNTA will provide a Siting and Facility study containing attendance estimates, costs for remodeling and exhibits set up and operating costs for the Center at SRS or at an offsite location. Upon completion of a Siting and Facility Study by CNTA, the Heritage Tourism Team will evaluate the findings of the study and explore funding to establish and operate such a Center.

The establishment of a non-profit SRS Heritage Foundation (as a successor to CNTA) is in process. It is agreed fund raising for the SRS Heritage Center by the SRS Heritage Foundation cannot proceed until after there is agreement on the location of the Center. Preliminary study suggests that 742-A will be the selected site. DOE has agreed to explore the options of a lease, transfer, or other means to make available a SRS building or land to CNTA. However, DOE must consider SRS mission impacts, security, Site boundary proximity, infrastructure requirements, and worker and public health risks, before entering into an agreement to furnish CNTA with building or land. SR may also explore the options and costs for transferring a portable building to CNTA, to be disassembled and re-assembled at an offsite location if the Heritage Tourism team determines that an onsite location is not feasible.

The Heritage Tourism Team will look at how other Federal facilities such as NASA's Kennedy Space Center and the Bureau of Reclamation's Hoover Dam National Historic Landmark have managed to balance new safety and security concerns with public visitation.

The signatories of this PA recognize that the DOE has no appropriated funds to establish and operate the Center at this time.

4.5.6.3 C Reactor District

SR has elected to set aside C Reactor area for future interpretation and preservation. Its complement of associated buildings has been removed from the D&D schedule. These facilities include: 105-C, 106-C, 107-C, 108-1C, 108-2C, 109-C, 151-1C, 151-2C, 701-1C, 704-C, 706-C, 186-C, and 190-C. This constitutes almost an entire reactor area including a heavy-water moderated and cooled production reactor.

The immediate treatment plan for these buildings is located in Section 4.7.1. Planning for the future of the preserved reactor area however will be the focus of the Heritage Tourism Team.

4.5.6.4 Education/Outreach

SR will continue its broad-based efforts to educate students, the public, and its personnel about the Site's Cold War history. SRSO will participate in this effort to the extent possible given their mission.

- SR will distribute *Savannah River Site at Fifty* either in book format or on CD to schools and public and university libraries within the CSRA and major libraries and universities in the State of South Carolina in 2005. It may also distribute copies of the brochure "Patriots of the Atomic Age." Both publications have already been produced and can be easily distributed.

- The contractor responsible for Cold War Historic Preservation's Office of Public Affairs (OPA) will adjust its existing tour program to also focus on the historic Cold War built environment and that can be offered given security constraints when the nation's security level is considered low or guarded.[18] If such tours are not possible, given security restraints, a virtual tour may be developed, dependant upon funding that can be approved for use in an Internet application in 2005.

- SR and SRSO will provide opportunities for their personnel to learn about the Site and its historical legacy through annual presentations that include hands on experience with Cold War artifacts and/or tours. Such presentations will be educational but entertaining, allowing current personnel to see a "slice" of the past at SRS particularly the site as workplace.

- SR's Office of External Affairs (OEA) will assist with the placement of state historical markers that commemorate historical events, people and places on the site and will work with sponsors and the South Carolina Historical Marker Program administered by the South Carolina Department of Archives and History. South Carolina Historical Markers mark and interpret places important to an understanding of South Carolina's past, either as the sites of significant events, or at historic properties such as buildings, sites, structures, or other resources significant for their design, as examples of a type, or for their association with institutions or individuals significant in local, state, or national history. In the past, markers were placed along the nearest South Carolina state highway and contained references to the location of the place being marked, usually some distance away. More recently, markers have been erected at the historic site itself without restriction to state highways and on other public streets and county roads.

  SR, SRSO and their contractors, and SRS retirees may wish to participate in such commemorations or other sponsors might be found to participate in this endeavor. Possible candidates for Cold War would be the 400-D Area for heavy water production, P Reactor as site of discovery of neutrino, and any whole building area to be demolished such as T and M. In addition, historical markers for pre-federal town sites, Dunbarton and Meyer's Mill may be considered as well as sites of historic places that predated SRS.

- Future activities will seek to educate the SRS work force, about 10,000 individuals, about the Site's history. The Site prepares a safety calendar each year to inculcate safety values in the workforce. This is a very effective tool. A similar effort could be used with historical views and historical quotes or events from the Site chronology in *Savannah River Site at Fifty*. Posters may also be considered as an educational tool. Short video segments prepared for the Site's network would be another avenue to disseminate information about historical preservation efforts. Keeping historical values in the

[18] See Homeland Security website http://www.dhs.gov/dhspublic/display?theme=29

forefront of the SRS community will help protect cultural resources and develop a sensibility and respect for the past and the buildings and artifacts that represent that past.

4.6 Curation

4.6.1 Preservation

A curator that meets the Secretary of Interior's professional standards will be designated for the Cold War artifact collection and a group of the contractor's personnel will be trained in the proper storage and handling of artifacts. A designated group of the contractor responsible for Cold War Historic Preservation personnel under the onsite guidance and direction of the curator will coordinate Cold War artifact curation.

SR will participate with local historical organizations, science museums, and scientific societies to further public knowledge about SRS and its contribution to the state and nation's history through the development of permanent and/or mobile historic exhibits using SRS Cold War historic artifacts.

An "Artifact Team" has been developed and tasked with providing a protocol for Cold War artifact identification, retrieval, and preservation and specified the following participants:

- One representative from SR;
- One representative from the SRSO (for SRSO Cold War NRHP-eligible historic properties);
- One representative from the contractor's Facility Disposition Program;
- One representative from CNTA;
- One representative from SRARP; and
- The contractor's Historian as a minimum.

The composition of the team may change with the addition of facility workers, retirees, SHPO, or state or local museum workers as needed.

The Artifact Team will serve as protocol and guidance advisors. Their input will be on the types and kinds of items that need to be identified and preserved, the manner in which the work is conducted, and larger curation issues.

They will:

- review status of current artifact collection;
- evaluate current curation strategy (see below 4.6.3) and make changes accordingly;
- provide input into larger curation issues;
- provide input into the opening of the collection for research;
- establish cooperative working relationships with area museums and historical societies for the display and development of SRS Cold War exhibits; and

- receive monthly reports from the contractor responsible for Cold War Historic Preservation on collection progress and provide input on collecting issues especially related to but not limited to contamination issues.

The roles and responsibilities for the assigned team are given below.

SR is responsible for**:**

- leading meetings discussing Environmental Management (EM)-owned Cold War NRHP-eligible historic properties; and

- monitoring, reviewing, and assessing the identification, retrieval and curation of Cold War artifacts within EM-owned Cold War NRHP-eligible historic properties.

SRSO is responsible for:

- leading meetings discussing SRSO-owned Cold War NRHP-eligible historic properties;

- monitoring, reviewing, and assessing the identification, retrieval and curation of Cold War artifacts, within SRSO-owned Cold War NRHP-eligible properties; and

- providing input on training collections, tools, or equipment, historic or otherwise, that may be used currently or in the future used to educate the American public about the SRS Cold War tritium mission.

The Contractor responsible for Cold War Historic Preservation is responsible for:

- providing a suitable facility or facility for artifact curation that meets 36 CFR 79 or that will fully meet the standards after improvements;

- providing curation services for SRS Cold War artifacts as defined in 36 CFR 79 and designating a curator that meets the Secretary of Interior's standards;

- training designated personnel to identify, retrieve and curate SRS Cold War artifacts under the accepted protocol;

- identifying key cleared site personnel to mentor artifact collection within area of expertise;

- maintaining and updating the SRS Cold War database;

- completing condition reports and identifying conservation priorities;

- establishing a network of conservation specialists for on-call use when needed;

- recommending curation facility needs;

- developing cost estimates for future curation needs, and

- making arrangements for artifact loans or donations to applicable institutions using accepted SR loan agreements and arranging insurance if necessary.

SRARP is responsible for:

- providing advice and assistance to SR and SRSO as requested;
- providing review and comment on applicable documents; and
- working with the contractor responsible for Cold War Historic Preservation on curation matters or other Cold War History artifact concerns, as needed.

CNTA is responsible for:

- providing background knowledge, and consulting advice, on potential artifacts and their functional role in Site operations;
- providing recommendations on a list of artifacts for preservation; and
- providing input into artifact retrieval plans and preservation plans.

4.6.2 Inventory, Accession, Labeling, and Cataloging

These procedures are fully described in the Curation Strategy. See Section 6, Appendix F.

4.6.3 Identification, Evaluation and Documentation

To address these procedural issues, guidelines were developed in the *Savannah River Site Cold War Era Artifacts and Records Curation Strategy* (2000). The strategy was modeled after a curation approach developed at Hanford through consultation with historians, museum, professionals, interested persons, the U.S. Department of Energy, Richland Operations Office (DOE-RL), and contractor staff. This document was revised after meetings of the newly formed Artifact Team (see Section 6, Appendix F).

The selection criteria for SRS artifacts that was developed was as follows:

1. *Artifacts associated with historically significant figures at SRS*. Artifacts within this category shall include objects that were either used by, owned, invented, made by, or are the personal effects (ephemera or memorabilia) belonging to individuals significant to the Site's history.

2. *Artifacts associated with historically important events*. Objects within this category will include artifacts relating to, or associated with, major events at SRS (i.e., unusual events, important expansions, start ups, special visits, scientific discovery or technological change, and other discrete events that reflect SRS' role/contribution to our national heritage.)

3. *Artifacts representing the Site's technical history and significant advances in technology*. Objects within this category reflect significant developments and contributions to science and technology and include, but are not limited to, such topics as the plutonium production process, heavy-water production, tritium production, fuel and target production, reactor and separations processes, radioisotopes, health physics, nuclear applications, reactor design, weapons, robotics, environmental management, and space-related research. Such items document the evolution of science/technology in the nuclear age. Models, scaled and unscaled, are good examples of this type of artifact.

4. *Documents* – Objects within this category include the printed and handwritten media record of operations, day-to-day, at SRS. These materials include: film, documents, photographs, maps, manuals, blueprints, engineering drawings, ephemera (signs), and memorabilia.

5. *Artifacts that reflect the SRS social historical impact*. This grouping refers to objects that reflect atomic social history at SRS. This grouping includes artifacts and documents that evoke the atomic workplace with its emphasis on secrecy, safety, protective clothing, equipment, newspapers, films, press releases etc.

6. *Oral History* - Interviews with individuals knowledgeable about the site and its history would be preserved and copies of taped interviews would be available for historical researchers.

In addition, historians in consultation with technical advisors to the SRS History Project placed an emphasis on the preservation of certain "signature" artifacts such as a well-preserved example of a reactor control room graphic panel, test reactors and control room housed in 777-10A, miniature mixer-settlers housed in SRNL, all building and process three-dimensional models, instruments and or equipment specially designed at SRS or associated with major achievements such as pinch welding, and a collection of security posters/postcards and cafeteria napkins.

As noted when a historian identified an in situ artifact or completed a review of a building's contents, if an artifact was identified that could not be removed, it was tagged, numbered, and researched to establish significance. This process was followed consistently in M Area which has been the only building area fully completed to date. If a better example of an artifact or a duplicate without radiological concerns was located, the tag was removed. If not, a mitigation strategy was implemented.

4.6.4 Storage and Maintenance

The Final Assembly area in 105-C is the selected curation facility. 105-C is a Cold War NRHP-eligible historic property of highest significance and the partial use of the building for curation is a good example of adaptive reuse.

The majority of artifacts were relocated there in September 2004; building models or process equipment models remain stored in 777-10A, an interim storage space. The Final Assembly area is a large open area with a high bay, concrete floors and walls, and oversize doors that allow easy access for large artifacts. It is secured. It has storage shelves on two walls and a locked storage area or "cage" within a larger open space that can be secured. The cage contains Vidmark drawer units that have been cleaned out for small artifact storage. Potential for vertical storage of hanging objects may also be achieved on the cage "walls" and on moveable racks. Space in the larger adjacent Assembly Area provides a location for large artifacts but that space is shared with other work groups, which lessen the physical security of the items stored there. Some office space and access to the Site's computer network is available in Final Assembly, which is another advantage. This office can be used to house the artifact database so that accessioning of the artifacts collected since 2001 can commence. Neither areas are temperature controlled so an alternate location or locations may be necessary to house artifacts that require temperature sensitive conditions.

Building 742-A, designated for probable use as the SRS Heritage Center, may in time house some artifacts that are sensitive to humidity and heat and provide office space for the curation team but its future as a Heritage Center devoted to interpretation and exhibits may preclude such uses for some time if at all. While documentary artifacts may be archived separately under the auspices of Site Archives within a permanent record group if space permits, space to store three dimensional artifacts that require a temperature-controlled environment is still needed.

The contractor responsible for Cold War Historic Preservation will examine the possibility of creating a temperature-controlled environment in the Final Assembly area in 105-C. Temperature and humidity monitors have been mounted in the secure area within 105-C to gather cumulative data on the interior temperatures to provide information that will influence the future selection of artifacts to be stored at this location.

The contractor responsible for Cold War Historic Preservation will also provide staff to monitor the collection weekly until a curator's office has been established in 105-C at the facility.

4.6.5 Periodic Inspection and Remedial Preservation

As curation may occur at multiple locations, the curator and staff need to monitor the dispersed collections and keep record of the movement of artifacts on site and on loan.

The Cold War curator and/or the curatorial assistant will also monitor collections that are in use for educational purposes around the site on an annual basis and will identify a contact point for individual artifacts or artifact collections to help monitor their condition and use. Facility managers in which artifacts are displayed or hung need to be notified of their presence and their treatment so that the curatorial staff is involved in their movement and care.

The Artifact Team will conduct periodic inspections to assess curation standards and the progress toward meeting the requirements of 36 CFR 79.

The curator will establish a list of conservation specialists to handle any remedial treatments needed.

4.6.6 Study

While there is no current framework in place that allows the study of these collections, researchers who are properly cleared and who have notified the curators of the collection of their research needs may do so currently. A plan for making these collections available for future research by the public is under evaluation by the Artifact Team.

4.7 Preservation and Protection

4.7.1 C Reactor Area Preservation

C Reactor area Cold War NRHP-eligible historic properties have been removed from the D&D schedule. These include: 105-C, 106-C, 107-C, 108-1C, 108-2C, 109-C, 151-1C, 151-2C, 701-1C, 704-C, 706-C, 186-C, and 190-C. This constitutes almost an entire reactor area including a heavy-water-moderated and cooled production reactor.

A candidate for DOE signature status, C reactor was selected for its historical significance in supporting the SRS Cold War mission and for its engineering. Five heavy-water-moderated production reactors were constructed at SRS and placed in operation between 1953 and 1955. These reactors were unique within a family of fourteen American production reactors due to their heavy water technology and the versatility that was built into their design. This versatility provided the means for later changes in target elements, production and safety that translated into greater longevity and production capability. 105-C was that last of the site reactors to go into operation in 1955 and it reached the highest power levels.

Its preservation is a landmark in DOE historic preservation and is in keeping with Executive Order 13287: Preserve America issued in March 2003 on the federal stewardship of historic properties:

> It is the policy of the Federal Government to provide leadership in preserving America's heritage by actively advancing the protection, enhancement, and contemporary use of the historic properties owned by the Federal Government, and by promoting intergovernmental cooperation and partnerships for the preservation and use of historic properties. [19]

Given the above, the preservation in place of selected historically significant properties is in keeping with defined DOE stewardship policies as well as in line with Executive Order 13287: Preserve America. In addition, public comment on the historic preservation of Cold War Resources at SRS gathered in 2003 vigorously identified preservation of selected historic facilities that were mission critical during the Cold War era as a major imperative.

SR will recommend to the DOE-FPO that C-Area be formally nominated to the NRHP and that a period of significance be established to set guidelines for its treatment (see Section 5.1.6).

There are no immediate plans to open C Area to the public but a treatment plan was called for in the PA so that the reactor area will maintain its integrity until its future use is defined. SR will undertake a C-Area Cold War NRHP-eligible historic property feasibility study. The study recommendations and conclusions will be the basis for an overall treatment plan and decisions for heritage tourism and interpretation of C Area. The study will include an evaluation of the treatment measures in Section 4.7.3, a conditions assessment, proposals for treatment using the Secretary of the Interior's Standards as a guide, and will address interpretation and public access issues in conjunction with heritage tourism objectives and SR missions. The recommendations and conclusions of the feasibility study will outline actions related to C Area historic properties.

A treatment plan for the reactor area Cold War NRHP-eligible historic properties for the interim period is outlined below:

- SR will assign a facility manager to steward the above listed 13 facilities and who will receive training on their preservation from a preservation professional or professional organization.
- SR will stabilize all the listed buildings from the elements.
- SR will only allow sympathetic uses of these buildings that will not endanger their historic fabric.
- SR will create signage that identifies these facilities as Cold War NRHP-eligible historic properties and place the signs on the facilities where they are readily visible;
- SR will not construct any new buildings within the historic reactor area.
- SR will preserve the vegetation buffer around the reactor area.
- SR will not allow any activity that will change the reactor area's plan or physical attributes outside the buildings but inside the reactor area fence line.
- SR will not terminate utilities to these facilities.

[19] Executive Order 13287:Preserve America, March 2003.

- SR will consult with Heritage Tourism Team/preservation professionals when the removal of buildings considered non-historic or intrusive within the historic area may impact a historic resource.

- The contractor responsible for Cold War Historic Preservation will retrieve artifacts, such as: equipment, lighting fixtures, gages, etc. from other reactor areas under D&D and place these safely in C Area so that C Area can be restored to its original appearance circa 1960.

4.7.2 Further Facility Preservation

The preservation of other facilities is limited given contamination levels of many of the highly significant Cold War NRHP-eligible historic properties and the plan to reconfigure the Site towards its geographic center. In some cases, the preferred end state for such facilities is *in situ* disposal that involves removing radiological and other hazardous material and decontaminating to the appropriate level. For example, the canyon and reactor Cold War NRHP-eligible historic properties may have *in situ* disposal leaving a significant portion of the SRS's Cold War history in place.

If preservation in place is not feasible, the removal of objects from their original physical contexts to preserve and use them interpretively is the expected method of preservation. For example, the canyon mockup cell used in 717-F may be preserved when it reaches the end of its operational life. The cell may be removed from the building for interpretation in A-Area or in C-Area.

777-10A is another example in which the control room (s), small test reactors, and the portion of the Process Development Pile reactor above the floor (including its "forest") will be dismantled and reassembled at a venue that is open and available to the public. The same method could be used to recreate a production reactor control room, the quintessential Cold War artifact at SRS, with the careful disassembly and assembly of one of the intact reactor room graphic panels.

Cold War NRHP-eligible historic properties of significance that add to our knowledge about safety, security and the workplace will also be evaluated for objects, equipment or general artifacts that can contribute to our understanding of the SRS. An example of this is a small 1950s era Butler building that was erected in 190-P, a large pumphouse, to house the operator and to protect his hearing from the noise created by the enormous pumps that circulated water to the reactor building. This building has been dismantled for removal to C-Area where it can be used to interpret safe working conditions and to enable future interpreters to evoke what it was like to work in that environment,

4.7.3 Area Preservation

As further preservation of Cold War facilities is limited, SR will consider the preservation and future interpretation of the town site of Ellenton as part of its preservation planning. Located west of C-Area, off publicly accessible State Highway 125, and in an area geographically distant from the site's core, the town site with its intact curbing, driveways, foundations, and "main street" area by the railroad would be an excellent choice for interpretation of the pre-federal landscape and would contrast well with the Cold War landscape preserved in C-Area. The two areas, pre and post Cold War, provide a culturally rich and dramatic storyline about South Carolina's twentieth-century history. Also, SRARP has produced much documentation of the Ellenton town site that could be used to interpret the site and to educate visitors about the sacrifice area residents made for their country in 1950.

To this end, SR will undertake a town site of Ellenton feasibility study (see Section 2.2). The study recommendations and conclusions will be the basis for an overall treatment plan and

decisions for heritage tourism and interpretation for the historic town site. The study will include a conditions assessment, proposals for treatment using the Secretary of the Interior's Standards as a guide, and will address interpretation and public access issues in conjunction with heritage tourism objectives and SRS missions. The recommendations and conclusions of the feasibility study will outline actions related to the Ellenton town site.

4.7.4 Human Forces

A Programmatic Agreement on the Protection of Historic Properties During Emergency Response Under the National Oil and Hazardous Substances Pollution Contingency Plan was signed in 1997 by the US Department of Energy (See Section 6, Appendix D). The PA develops an action plan for taking historic properties into account during emergency response to an actual or threatened release of a hazardous substance, pollutant or contaminant or the discharge of oil or other pollutants. An emergency was defined as existing whenever circumstances dictate that a response action to a release or spill must be taken so expeditiously that normal consideration of the Section 106 process is not practicable. The PA allows the On-Scene Coordinator to make informed decisions concerning effects to historic properties that may occur in protecting public health and safety. The PA identifies how and where the On-Scene Coordinator can receive expertise and support, the planning steps to be followed, historic property protection strategies, assessment of effects, record keeping, and provides a list of categorical exclusions.

4.7.5 Authorized Actions

A quality assurance plan has not yet been developed that will address the protection and treatment of Cold War NRHP-eligible historic properties. This is one of the short-term goals of this plan.

4.7.6 Illegal Acts

The site is protected by Wackenhut Services, Incorporated (WSI-SRS) who provides security support services for DOE. WSI-SRS is a paramilitary organization that provides total security services including access control, property protection, law enforcement, criminal investigations, traffic control, canine explosives and drug detection, aviation support, river patrol, alarm equipment monitoring, and a Special Response Team.

In addition, all employees receive training initially and annually that reinforces the security code and security parameters that are in place at the site.

4.8 Outreach Prior to PA

The guided bus tours of the site were the main focus of the Cold War outreach. As discussed in Section 3.4.9.1, they are on hold following September 11, 2001.

4.9 Interagency Information Exchange

The contractor responsible for Cold War Historic Preservation (with concurrence from DOE) will develop guidance for a data management system for recording facilities and for technical reports. A consistent data management system is intended to facilitate the interagency exchange of information.