

# *Project Baseline Summary Report*

Data Source: **EM CDB**

Operations/Field Office: **Savannah River**

Site Summary Level: **Savannah River Site**

Project **SR-IN05 / CFC HVAC Chiller Retrofit**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0104**

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## **General Project Information**

### **Project Description Narratives**

#### **Purpose, Scope, and Technical Approach:**

Definition of Scope: Mechanical chill water machines at SRS that utilize CFC refrigerants have been assessed for condition and future need via a Chiller Assessment Survey. Fifty one machines have been identified that require retrofit or replacement.

Technical Approach: The best Life Cycle Cost solution for removing the CFC machines is being determined for each facility with consideration of mission, base installation cost energy usage, and operations/maintenance cost. Opportunity for reducing chillers through consolidation have been identified in several areas, resulting in much more efficient systems when coupled with current technology chillers.

#### **Project Status in FY 2006:**

Project is completed and turned over to Operations

#### **Post-2006 Project Scope:**

N/A

#### **Project End State**

Project is completed and equipment is being operated by Operations.

#### **Cost Baseline Comments:**

The subprojects are baselined according to the base installation cost of the best Life Cycle Cost solution for these areas. Changes for FY 2001 are due to previous submissions not taking DOE Contingency into account for this project. Additional scope in the completion of B Area Chillers has been added to FY 2001 and some work associated with S Area chillers has been moved to FY 2002 resulting in changes in distribution, but overall the Line Item TPC remains the same.

#### **Safety & Health Hazards:**

The Infrastructure Program facilitates use of Site general areas and provides for maintenance of common shared services such as roads, bridges, utility facilities, central sanitary facilities and etc. Infrastructure supports facilities that have chemical and radiological hazards, but does not generally participate in their control and monitoring. For Infrastructure, typically only those hazards associated with work at an industrial facility are present.

In the case of the CFC HVAC/Chiller Retrofit project, the Line Item mitigates environmental hazards by removal of CFC-bearing refrigerants from site chiller systems. There are no additional hazards associated beyond those normally associated with work in an industrial facility.

#### **Safety & Health Work Performance:**

Activities and check points are described by the Integrated Management System Description. The conditions and requirements are clearly established and agreed upon prior to the starting of any project and those requirements are contractually binding upon WSRC. The key elements of the WSRC

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## Project Description Narratives

Integrated Safety Program are to define the scope of work, identify and analyze hazards associated with the work, develop and implement hazard controls, perform work within controls, and provide feedback on adequacy of controls and continue to improve safety management. The WSRC Integrated Procedures Management System is the primary mechanism for implementing the objective, principles and functions of the Safety Management System. This system establishes Company-Level, Division-level, and Program-specific procedures consistent with organizational roles, and ensures a consistent, discipline site-wide approach to safety while performing work.

### PBS Comments:

FY98 operating funded scope assumes use of DOE and contractor FY97 uncosted balances. This activity is fully within the target funding case and is based upon OPC and TEC funding according to the following plan that has been submitted to DOE-HQ (totals: TEC \$45,000,000; OPC \$13,500,000):

The subprojects identified in this TDS represent the highest priority efforts given the current equipment conditions, site mission status, environmental and/or regulatory compliance information, etc. However, site requirements, unexpected regulatory or safety driven issues, or equipment failures may result in a re-prioritization of the activities which may result in subprojects being substituted for those identified as "New Starts". Subproject additions, substitutions, or deletions will be controlled through the Baseline Change Proposal process.

Failure to replace/retrofit refrigeration equipment to operate on new refrigerants will result in loss of comfort and process cooling in SRS facilities after existing CFC refrigerant inventories are depleted. Nationwide demand for CFC refrigerant will drive supplies down and consequently increase cost dramatically. EPA may take regulatory enforcement action, such as consent agreements and/or fines.

### Baseline Validation Narrative:

LI Project Review.

## General PBS Information

Project Validated? Yes Date Validated: 3/1/1996

Has Headquarters reviewed and approved project? Yes

Date Project was Added: 12/1/1997

Baseline Submission Date: 7/3/1999

FEDPLAN Project? Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	N	N	N	N	N	N	N	Y

## Project Identification Information

DOE Project Manager: L. E. Snyder

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## General PBS Information

**DOE Project Manager Phone Number:** 803-7254993  
**DOE Project Manager Fax Number:** 803-725-0375  
**DOE Project Manager e-mail address:** larry.snyder@srs.gov  
**Is this a High Visibility Project (Y/N):**

## Planning Section

### Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (current year dollars)	52,864	0	52,864	5,365	5,365	13,695	13,695	9,339	5,065	12,798	6,602	0	0	0	0	
PBS Baseline (constant 1999 dollars)	51,201	0	51,201	5,365	5,365	13,695	13,695	9,339	4,889	11,924	5,989	0	0	0	0	
PBS EM Baseline (current year dollars)	52,864	0	52,864	5,365	5,365	13,695	13,695	9,339	5,065	12,798	6,602	0	0	0	0	
PBS EM Baseline (constant 1999 dollars)	51,201	0	51,201	5,365	5,365	13,695	13,695	9,339	4,889	11,924	5,989	0	0	0	0	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
PBS EM Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	3.60%	3.60%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

## Project Reconciliation

### Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/2001

Current Projected End Date of Project: 6/30/2002

### Explanation of Project Completion Date Difference (if applicable):

Changes reflective of schedule changes due to:

1. Funding profile changes in Site needs
2. Addition of B Area scope to Line Item

### Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	44,494	Actual 1997 Cost:	5,365	Actual 1998 Cost:	13,695
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	25,434	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):	687		
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	26,121				

### Project Cost Changes

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## Project Reconciliation

### Cost Adjustments    Reconciliation Narratives

**Cost Change Due to Scope Deletions (-):**

**Cost Reductions Due to Efficiencies (-):**

**Cost Associated with New Scope (+):**

6,019    Added scope for B Area chillers. No increase in overall project cost.

**Cost Growth Associated with Scope Previously Reported (+):**

**Cost Reductions Due to Science & Technology Efficiencies (-):**

**Subtotal:**

32,140

**Additional Amount to Reconcile (+):**

1    Apparent scope increase caused by updating prior year expenditures.

**Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):**

**32,141**

## Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
LI96-471, Ops Testing Complete 235-F	SR-IN05-001		6/30/1999		6/30/1999						
LI96-D-471, Facility Plan Complete HB-Line	SR-IN05-002		7/31/1999		7/31/1999						
LI96-D-471, Facility Plan Complete NSR	SR-IN05-003		4/30/1999		4/30/1999						
LI96-D-471, Facility Plan Complete S-Area	SR-IN05-004		7/31/1999		4/30/2000						
LI96-D-471, Ops Testing Complete F-area	SR-IN05-005		5/31/1999		5/31/1999						
LI96-D-471, Ops Testing Complete Tritium	SR-IN05-006		4/30/1999		4/30/1999						
Construction Complete	SR-IN05-007		6/30/2002								
Project Start	SR-IN05-008		10/1/1996								

## Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
LI96-471, Ops Testing Complete	SR-IN05-001						1		1		FY 1999 AOP Number is LIC14

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## Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
235-F											
LI96-D-471, Facility Plan Complete HB-Line	SR-IN05-002						1		1		LIC13
LI96-D-471, Facility Plan Complete NSR	SR-IN05-003						1		1		FY 1999 AOP Number is LIC06.
LI96-D-471, Facility Plan Complete S-Area	SR-IN05-004						1		1		FY 1999 AOP number is LIC05.
LI96-D-471, Ops Testing Complete F-area	SR-IN05-005						1		1		FY 1999 AOP number is LIC04.
LI96-D-471, Ops Testing Complete Tritium	SR-IN05-006						1		1		FY 1999 AOP number is LIC12.
Construction Complete	SR-IN05-007				Y		1		1		Congressional milestone construction complete by 6/30/02
Project Start	SR-IN05-008			Y							

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