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# Westinghouse Savannah River Company 2003 ALARA Goals (U)



**March 2003**

Westinghouse Savannah River Company  
Savannah River Site  
Aiken, SC 29808

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CY03 ALARA Goals (U)

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# Savannah River Site 2003 ALARA Goals (U)

## Approvals

**Signature on file**

\_\_\_\_\_  
Site ALARA Coordinator

Date: \_\_\_\_\_

**Signature on file**

\_\_\_\_\_  
Manager, Radiological Protection Services

Date: \_\_\_\_\_

**Signature on file**

\_\_\_\_\_  
Manager, Environment, Safety and Health Services

Date: \_\_\_\_\_

**Signature on file**

\_\_\_\_\_  
Acting Chief Operations Officer  
Chairman, Site ALARA Committee  
Westinghouse Savannah River Company

Date: \_\_\_\_\_

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**CY03 ALARA Goals (U)**

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The Site ALARA Committee and the Business Unit ALARA Coordinators were integrated in the process of developing the Savannah River Site's 2003 ALARA Goals.

The ALARA goals for the Savannah River Site (SRS) for CY03 were established by the Business Units based on the anticipated work for the calendar year. The facilities were grouped per the established business unit. The legal dose of record is tracked by Health Physics Services.

To obtain additional information or submit comments, please contact:

Athena D. Freeman  
Westinghouse Savannah River Company  
Building 730-4B  
Savannah River Site  
Aiken, SC 29808

(803) 952-9938  
(803) 952-6826 (Fax)  
E-Mail: [athena.freeman@srs.gov](mailto:athena.freeman@srs.gov)

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**CY03 ALARA Goals (U)**

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CY03 ALARA Goals (U)

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**Table of Contents**

<b>Section</b>	<b>Title</b>	<b>Page</b>
I.	2003 ALARA Goals	
I.A	Executive Summary	1
I.B	Radiological Performance Goals	2
I.C	Summary of 2003 ALARA Goals	3
I.D	2003 Business Unit Goals	4
	I.D.1 Cumulative Exposure Goals	4
	I.D.2 Administrative Control Level (ACL)	5
	I.D.3 Personnel Contamination Goals	5

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**CY03 ALARA Goals (U)**

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**List of Tables**

<b>Table</b>		<b>Page</b>
I.C-1	Summary of CY02 versus CY03 ALARA Goals	3
I.D-1	Summary of Business Unit Cumulative Exposure Goals	4
I.D-2	Summary of Business Unit Administrative Control Level (ACL)	5
I.D-3	Summary of Personnel Contamination Goals	5

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**CY03 ALARA Goals (U)**

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**I.A Executive Summary**

The ALARA goals for the Savannah River Site (SRS) for CY03 were established by the Business Units based on the anticipated work for the calendar year. The legal dose of record is tracked by Health Physics Services.

The 209.31 rem cumulative exposure goal is for base routine operations. Exposure goals for the special work operations are being maintained in the account established by calendar quarter. The preliminary special work goal for CY03 is 56.21 rem.

An Administrative Control Level (ACL) of 1000 mrem per year Total Effective Dose Equivalent (TEDE) has been established for the site and all facilities, except where noted.

The goal range of 40 - 60 personnel contamination is the total goal for skin contamination and personal effects contaminations. We do not separately track or report skin and personal effects contamination.

The goal for intakes of radioactive material resulting in an exposure greater than 100 mrem Committed Effective Dose Equivalent (CEDE) from a single event continues to be zero.

The ALARA goals have been established using the following assumptions:

- Data is sorted by total radiation exposure received in facilities listed by the business units operating those facilities
- Estimates for base routine operations uses status of planned work as of January 1, 2003
- Estimates for special work operations are forecast for calendar year 2003
- "Other" category is minimized and assigned appropriately

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CY03 ALARA Goals (U)

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## I.B Radiological Performance Goals

**Cumulative Radiation Exposure** is based on total effective dose equivalent exposures (including tritium) resulting from Base Routine Operations and Special Work Operations.

- *Base Routine Operations* are related to normal day to day activities.
- *Special Work Operations* are not part of routine operations and typically are of limited, non-repetitive duration. Special Work Operations goals are reviewed quarterly.
- **Maximum Individual Exposure/Administrative Control Levels** are established to maintain personnel radiation exposure well below the DOE Administrative Control Level of 2000 mrem. The site has established an Administrative Control Level (ACL) which requires Senior Management approval to exceed.
- **Personnel Contaminations** are established for tabulated skin and personal effects contaminations. Contamination events are tabulated in accordance with DOE Manual 232.1, "Occurrence Reporting and Processing of Operations Information".
- **Confirmed Intakes resulting in CEDE >100 mrem** – Internal dose evaluations combined with bioassay measurements and whole body counting are the primary methods utilized to determine the Committed Effective Dose Equivalent (CEDE) of internally deposited radionuclides.

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**CY03 ALARA Goals (U)**


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**I.C Summary of 2003 ALARA Goals**

ALARA Goals are established and tracked calendar year. Table I.C-1 lists and compares CY02 goals to CY03 goals.

Table I.C-1 Summary of CY02 versus CY03 ALARA Goals

<b>Exposure Control</b>	<b>CY02 Goal</b>	<b>CY03 Goal</b>
<b>Cumulative Exposure (rem)</b>		
Base Routine Operations	181.75	209.31
Special Work Operations	39.97	56.21
<b>Maximum Dose to a Worker (mrem/yr.)</b>		
Administrative Control Level (Site and Facilities)	500	1000
Administrative Control Level (Designated FB-Line Operators)	1200	1500
<b>Personnel Contamination</b>		
Number of Personnel Contaminations	36	40 -60
<b>Confirmed Internal Exposure</b>		
Number of confirmed intakes with a dose of at least 100 mrem CEDE from a single event.	0	0

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**CY03 ALARA Goals (U)**


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**I.D 2003 Business Unit Goals****I.D.1 Cumulative Exposure Goals**

Business Unit exposure goals include radiation doses of those support group doses assigned to the business unit Table I.D-1 lists the summary of business unit cumulative exposure goals for the CY03.

Table I.D-1 Summary of Business Unit cumulative exposure goals for CY03

<b>Business Unit</b>	<b>Base Routine (rem)</b>	<b>Special Work (rem)</b>
<b>Closure Business Unit</b>		
H-Area Closure Projects	23.0	-
F-Area Closure Projects	85.0	-
Waste Solidification Projects	1.0	7.0
Liquid Waste Disposition Projects	19.18	43.2
Laboratories	10.0	5.0
<b>Operations Business Unit</b>		
Nuclear Materials Management	13.0	-
Solid Waste & Infrastructure	10.0	-
<b>Savannah River Technology Center</b>	14.7	0.300
<b>Wackenhut Services Incorporated</b>	20.0	-
<b>Miscellaneous</b>	13.43	0.71
<b>Site Totals</b>	<b>209.31</b>	<b>56.21</b>

Note: \*MISC includes Defense Programs, Soil & Groundwater Closure Projects, Management Services, DOE, subcontractors, and others.

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**CY03 ALARA Goals (U)**


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**I.D.2. Administrative Control Levels (ACLs)**

Table I.D-2 lists the summary of maximum individual exposures. An ACL of 1000 mrem per year has been established for the Site and all facilities, except where noted. An ACL for designated FB-Line operators has been set at 1500 mrem as shown in Table I.D-2. Tracking and reporting of individual exposures are being continued and are based on a calendar year for regulatory purposes.

Table I.D-2. Summary of Administrative Control Limits (ACLs) for CY03

<b>Business Unit</b>	<b>ACL (mrem/year)</b>
Closure	
Designated FB-Line Operators	1500
DOE	150
<b>General Site and Facilities</b>	<b>1000</b>

**I.D.3 Personnel Contamination Goals**

Table I.D-3 lists the personnel contamination goal. The goal range of 40-60 personnel contaminations is the total goal for skin contamination and personal effects contamination. We will no longer track separately skin and personal effects contamination. The total of personnel contaminations includes the goals for support groups.

Table I.D-3. Personnel Contamination Goal

<b>2003 Personnel Contamination goal</b>
40-60 cases