

# Westinghouse Savannah River Company 2004 ALARA Goals (U)



**January 2004**

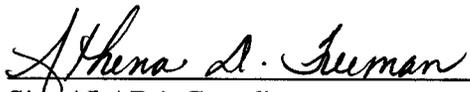
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Westinghouse Savannah River Company  
Savannah River Site  
Aiken, SC 29808

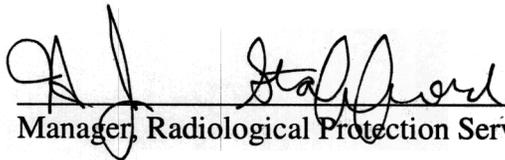
CY04 ALARA Goals (U)

# Savannah River Site 2004 ALARA Goals (U)

## Approvals

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

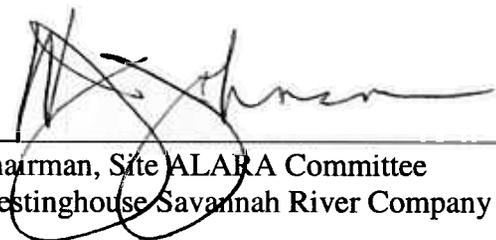
Date: 2-2-04

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

Date: 2/5/04

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

Date: 2/6/04

  
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Chairman, Site ALARA Committee  
Westinghouse Savannah River Company

Date: 2/11/04

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**CY04 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 2004 ALARA Goals.

The ALARA goals for the Savannah River Site (SRS) for CY04 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.

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**CY04 ALARA Goals (U)**

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**CY04 ALARA Goals (U)**

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**CY04 ALARA Goals (U)**

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**CY04 ALARA Goals (U)**

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**I.A Executive Summary**

The ALARA goals for the Savannah River Site (SRS) for CY04 were established by the Business Units and their support groups based on the anticipated work for the calendar year. The legal dose of record is tracked by Health Physics Services.

The 190 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 CY04 is 59 rem.

A management challenge of a 10% improvement in personnel contaminations and employee dose for 2004 as compared to 2003 performance is a SRS commitment to DOE as an indication of continuous improvement. (Ref: Letter, R. A. Pedde to J. M. Allison, "Safety Performance Expectations for Fiscal Year (FY) 2004", dated October 28, 2003)

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

The personnel contamination goal of 13 events is the total goal for skin contamination and personal effects contaminations. This is a change from previous years where we established this goal based on individual cases instead of events.

The goal for intakes of radioactive material resulting in an exposure greater than 500 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, 2004
- Estimates for special work operations are forecast for calendar year 2004
- "Other" category is minimized and assigned appropriately

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**CY04 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 and confirmed intakes resulting in a CEDE > 500 mrem are tabulated in accordance with DOE O 231.1A, "Environment, Safety and Health Reporting" and DOE M 231.1-2 "Occurrence Reporting and Processing of Operations Information".
  
- **Confirmed Intakes resulting in CEDE >500 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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**CY04 ALARA Goals (U)**


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**I.C Summary of 2004 ALARA Goals**

ALARA Goals are established and tracked by calendar year. Table I.C-1 lists and compares CY03 goals to CY04 goals.

Table I.C-1 Summary of CY03 versus CY04 ALARA Goals

<b>Exposure Control</b>	<b>CY03 Goal</b>	<b>CY04 Goal</b>	<b>CY04 Management Challenge</b>
<b>Cumulative Exposure (rem)</b>			
Base Routine Operations	209.31	190	179
Special Work Operations	56.21	59	55
<b>Maximum Dose to a Worker (mrem/yr.)</b>			
Administrative Control Level (Site and Facilities)	1000	1000	
<b>Personnel Contamination</b>			
Number of Personnel Contaminations	40-60 cases	13 events	
<b>Confirmed Internal Exposure</b>			
Number of confirmed intakes with a dose of at least 500 mrem CEDE from a single event.	0	0	

NOTE: The CY04 management challenge of 234 person-rem (179+55) reflects the site's commitment for a 10 percent improvement against the CY03 performance of ~260 person-rem.

## CY04 ALARA Goals (U)

**I.D 2004 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 Summary of Business Unit cumulative exposure goals for CY04

Business Unit	Base Routine (rem)	Special Work (rem)	Total Cumulative Exposure Goal (rem)	Management Challenge (rem) <sup>1</sup>
<b>Closure Business Unit</b>				
<i>H-Area Closure Projects</i>				
HB-Line	4	1	5	4.7
H-Canyon/OF	9	1	10	9.4
<i>F-Area Closure Projects</i>				
FB-Line	75	-	75	70.5
F-Canyon/OF	4	-	4	3.8
<i>Waste Solidification Projects</i>				
DWPF	3	-	3	2.8
<i>Liquid Waste Disposition Projects</i>				
H-Tank Farm	8	42	50	47
F-Tank Farm	9	8	17	15.9
299-H	0.2	2.8	3	2.8
<i>Laboratories</i>				
772-F/772-1F	10	5	15	14.1
<b>Operations Business Unit</b>				
<i>Nuclear Materials Management</i> (235-F & K-Area)	3	-	3	2.8
<i>Solid Waste &amp; Infrastructure</i> (SWMF - E Area)	21	-	21	19.7
<b>Savannah River Technology Center</b>	18	-	18	17
<b>Wackenhut Services Incorporated</b>	20	-	20	18.8
<b>Miscellaneous<sup>2</sup></b>	5	-	5	4.7
<b>Site Totals</b>	<b>190</b>	<b>59</b>	<b>249</b>	<b>234</b>

<sup>1</sup> Management Challenge supports the commitment from SRS to DOE for a 10% reduction in dose for 2004 as compared to the site's 2003 performance of ~260 person-rem.

<sup>2</sup> Miscellaneous includes Defense Programs, Soil & Groundwater Closure Projects, Management Services, DOE, subcontractors, and others.

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**CY04 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 annual ACL of 1000 mrem has been established for the Site and all facilities, except where noted. 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 Levels (ACLs) for CY04

<b>Business Unit</b>	<b>ACL (mrem/year)</b>
<b>DOE-SR</b>	<b>150</b>
<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 of 13 events for personnel contamination is the total goal for skin contamination and personal effect contamination. This year we will track personnel contaminations by events instead of individual cases. We will no longer track separately skin and personal effect contamination. The total of personnel contaminations includes the goals for support groups. The CY04 goal of 13 events reflects the site's commitment to DOE for a 10 percent reduction in personnel contamination events against the CY03 performance of 14 events (adjusted for new ORPS criteria).

Table I.D-3. Personnel Contamination Goal

<b>2004 Personnel Contamination Goal</b>
13 events