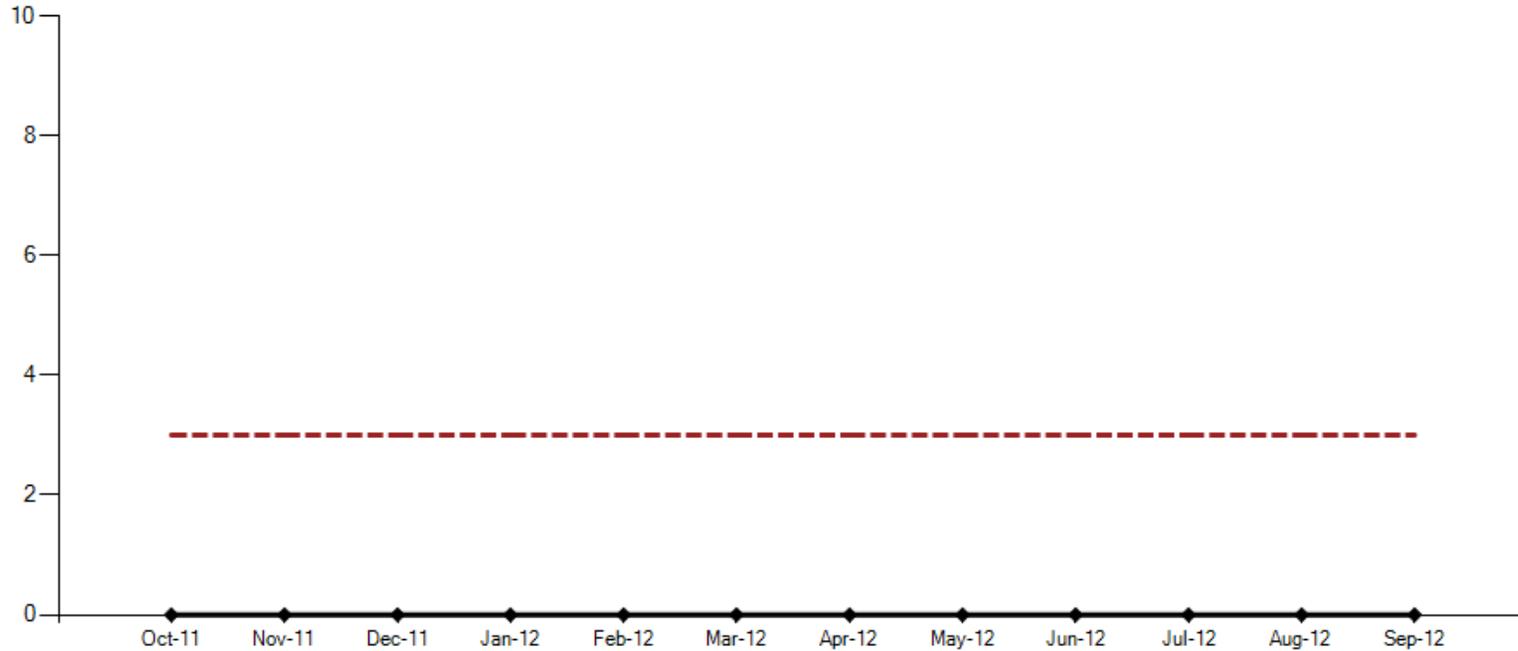


## EM Radiological Safety Performance ORPS Personnel Contamination Events Through January 04, 2012



Title	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12
Contamination Events	0	0	0	0	0	0	0	0	0	0	0	0
Contamination Events (FY)	0	0	0	0	0	0	0	0	0	0	0	0
Total SRNS Hours (Month)	996,661	1,032,150	968,085	0	0	0	0	0	0	0	0	0
Rad Worker Hrs. (Month)	615,054	637,354	612,442	0	0	0	0	0	0	0	0	0
Rad Worker Hrs. (FY)	615,054	1,252,408	1,864,850	1,864,850	1,864,850	1,864,850	1,864,850	1,864,850	1,864,850	1,864,850	1,864,850	1,864,850
Fiscal YTD Rate	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Rate	0	0	0	0	0	0	0	0	0	0	0	0
Goal	3	3	3	3	3	3	3	3	3	3	3	3
Score: Fiscal YTD Rate	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5

**Note:** Data prior to Oct 2011 is located on the Facility Metric page in the Historical ORPS Percon Event Chart under the HISTORICAL header.

Metric Details	
Metric Title	ORPS PerCon Events
Metric Owner/Alternate Owner	Gordon Quillin 2-8389/Greg Tunno 2-8477
Metric SME/POC	Ellen Parrish 8-1027
Metric DOE PI Owner	Chuck Radford 2-8595
Metric Functional Group	RPD, DOE, ESH
Metric Description	Measures ORPS reportable PerCon events <a href="#">6D(3)</a> & binned as <a href="#">FA 11.10.95</a>
Metric Definition	The Government FYTD rate is obtained by multiplying the number of events by 200,000 hrs & dividing by the number of applicable Rad Worker hrs.
Metric Value	Goal is measured in FYTD Rate
Metric Reporting Frequency	Monthly
Metric Requirements Drivers	<a href="#">5Q</a> , <a href="#">SCD-6</a> , <a href="#">5Q1.1-505</a> , <a href="#">1-01 4.4</a> , <a href="#">DOE G 441.1-1C</a>
Data Source(s):	<a href="#">STAR</a> (events) & Hummingbird Database (RWP hrs)
Grade Criteria	Based on ORPS contamination events & RWP hours.
<b>BLUE</b>	< 1.5
<b>VIOLET</b>	> 1.5 - < 2.5
<b>GREEN</b>	≥ 2.5 - ≤ 5.0
<b>YELLOW</b>	> 5.0 - ≤ 7.5
<b>RED</b>	> 7.5
Data Entry/Verification/Validation	Automatic pulls from STAR & Hummingbird Database
Data Inquiry	Please report any Scorecard technical issue to <a href="#">Raine Weimortz</a> or <a href="#">Steve Rich</a> or radiological related questions to <a href="#">Ellen Parrish</a>

### Analysis

**Analysis:** Excellent **Color:** Blue

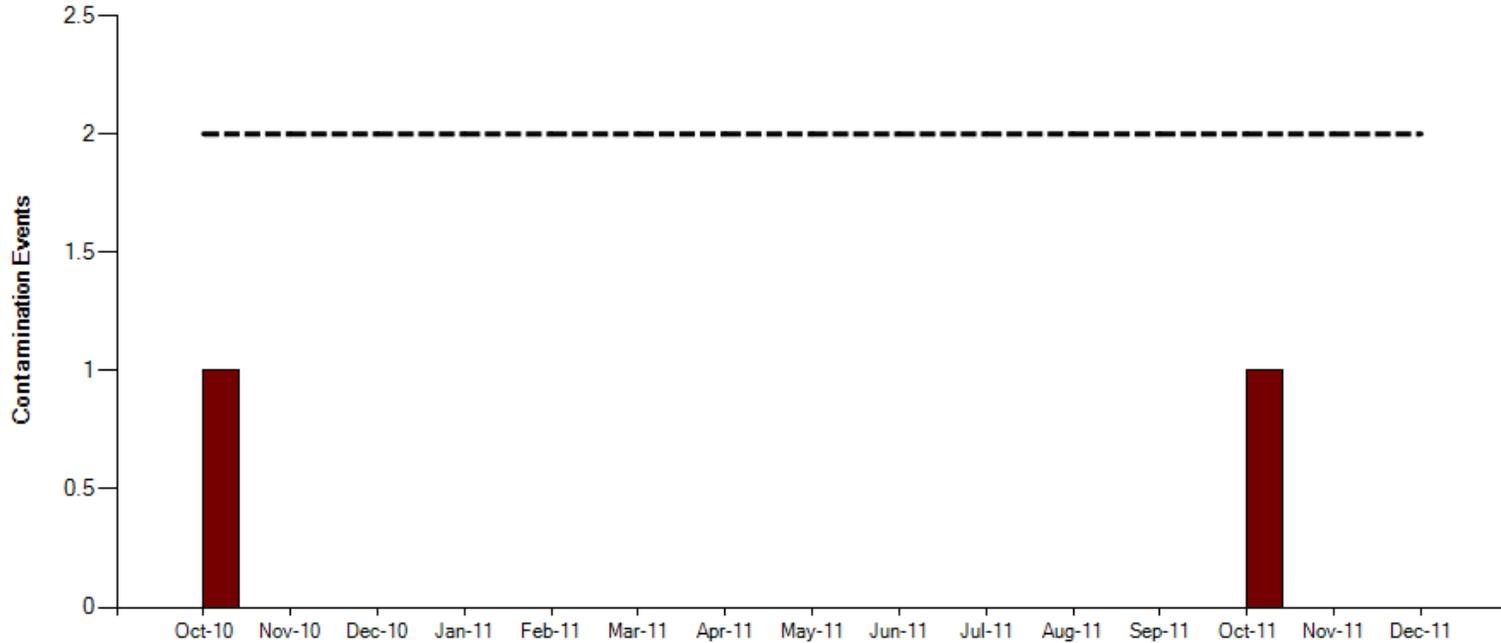
**ORPS(6D3) Event:** None

Beginning in Oct. 2008 the annual goal converted to a goal of  $\leq 3.0$  events per 200,000 RWP-hours. In Oct 2011 the method of obtaining Rad worker hours was revised. A percentage is taken of the Site hours to obtain the Rad Work hours. Please address any questions to Ellen Parrish.

**Action:** SRNS management continues to closely monitor contamination events, including STAR Third Tier events that are below the ORPS reporting thresholds. The Third Tier events are used as a leading indicator that may signal adverse trends that could lead to an increase in the number of reportable events. For each event, corrective actions are taken and documented in STAR and a review is performed for any commonalities that may exist.



**EM Radiological Safety Performance**  
**Number of Occurrences of Radioactive Material/Contamination**  
**Detected Outside of Radiological Areas**  
**Through December 31, 2011**



Title	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
Offsite Contamination Events	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Score: Offsite Contamination Events	=0	=0	=0	=0	=0	=0	=0	=0	=0	=0	=0	=0	=0	=0	=0
Contamination Events	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Score: Contamination Events	<=1	<=1	<=1	<=1	<=1	<=1	<=1	<=1	<=1	<=1	<=1	<=1	<=1	<=1	<=1

Metric Details	
Metric Title	Number of Rad Material ORPS Events
Metric Owner/Alternate Owner:	Gordon Quillin 2-8389/Greg Tunno 2-8477
Metric SME/POC	Ellen Parrish 8-1027
Metric DOE PI Owner	Chuck Radford 2-8595

Metric Functional Group	RPD, DOE, ESH
Metric Description	Measures ORPS reportable Rad Material events 6B(1-4) & binned as FA 11.10.91 or 11.10.93
Metric Definition	This metric is a lagging indicator for occurrences of radioactive material or spread of contamination found outside of radiological areas.
Metric Value	Measure is in number of events
Metric Reporting Frequency	Monthly
Metric Requirements Drivers	5Q, SCD-6, 5Q1.1-505, 1-01 4.4, DOE G 441.1-1C
Data Source(s)	STAR
Grade Criteria	Based on Offsite Contamination Events
BLUE	≤ 1 per month Onsite, = 0 per month Offsite
VIOLET	> 1 per month
GREEN	> 3 per month
YELLOW	> 6 per month
RED	> 9 per month or 1 offsite event
Data Entry/Verification/Validation	Automatic pull from STAR & offsite event data entry by Site ALARA Coordinator
Data Inquiry	Please report any Scorecard technical issue to Raine Weimortz or Steve Rich or radiological related questions to Ellen Parrish

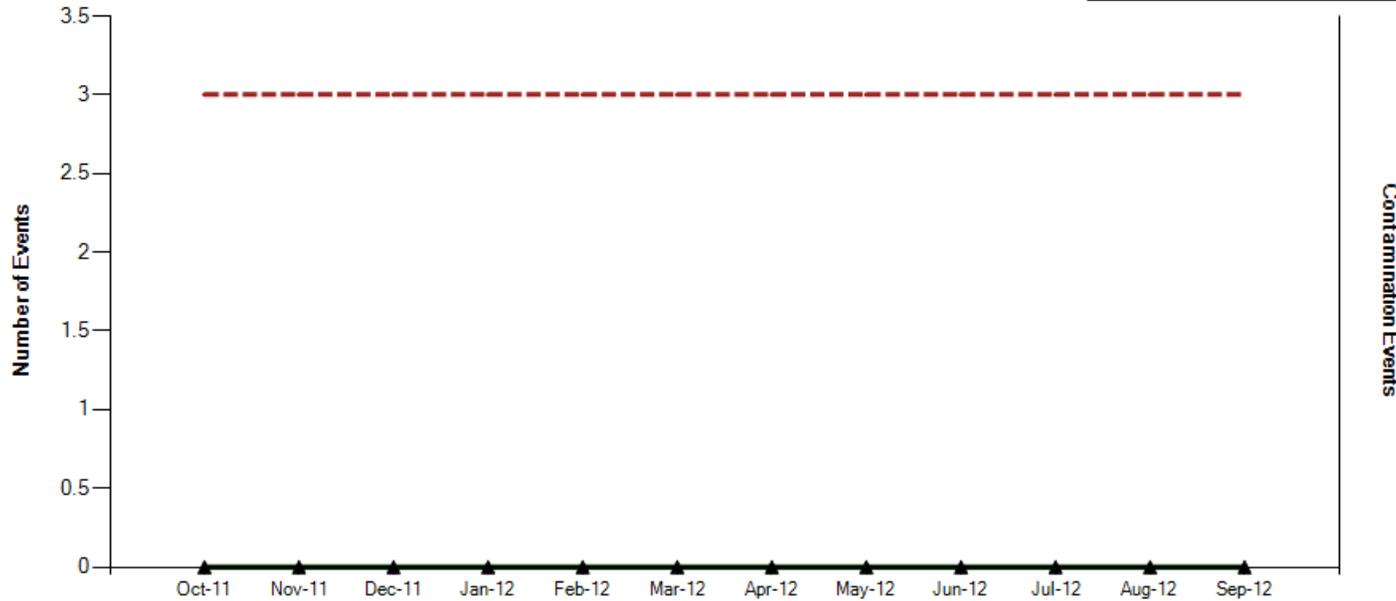
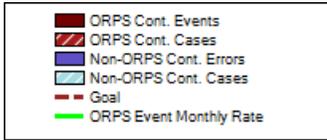
### Analysis

**Analysis:** Excellent **Color:** Blue

**Current ORPS Events:** None

SRS continues to use engineering controls to contain contamination at the source, performs MFO's in the field to assess the work area, and performs fact finding meetings of spread of contamination or radioactive material.

## EM Radiological Safety Performance Non-ORPS/ORPS Personnel Contamination Events/Cases Through January 04, 2012



Title	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12
ORPS Cont. Events	0	0	0	0	0	0	0	0	0	0	0	0
ORPS Cont. Events (FY)	0	0	0	0	0	0	0	0	0	0	0	0
ORPS Cont. Cases	0	0	0	0	0	0	0	0	0	0	0	0
Non-ORPS Cont. Errors	0	0	0	0	0	0	0	0	0	0	0	0
Non-ORPS Cont. Cases	0	0	0	0	0	0	0	0	0	0	0	0
Goal	3	3	3	3	3	3	3	3	3	3	3	3
Total SRNS Site Work Hours	996,661	1,032,150	968,085	0	0	0	0	0	0	0	0	0
Rad Work Hours (Monthly)	628,226	659,298	615,994	0	0	0	0	0	0	0	0	0
Rad Work Hours (FY)	628,226	1,287,524	1,903,518	1,903,518	1,903,518	1,903,518	1,903,518	1,903,518	1,903,518	1,903,518	1,903,518	1,903,518
ORPS Event Monthly Rate	0	0	0	0	0	0	0	0	0	0	0	0
ORPS Event FYTD Rate	0	0	0	0	0	0	0	0	0	0	0	0
Score: ORPS Event FYTD Rate	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5	<=1.5

### Analysis

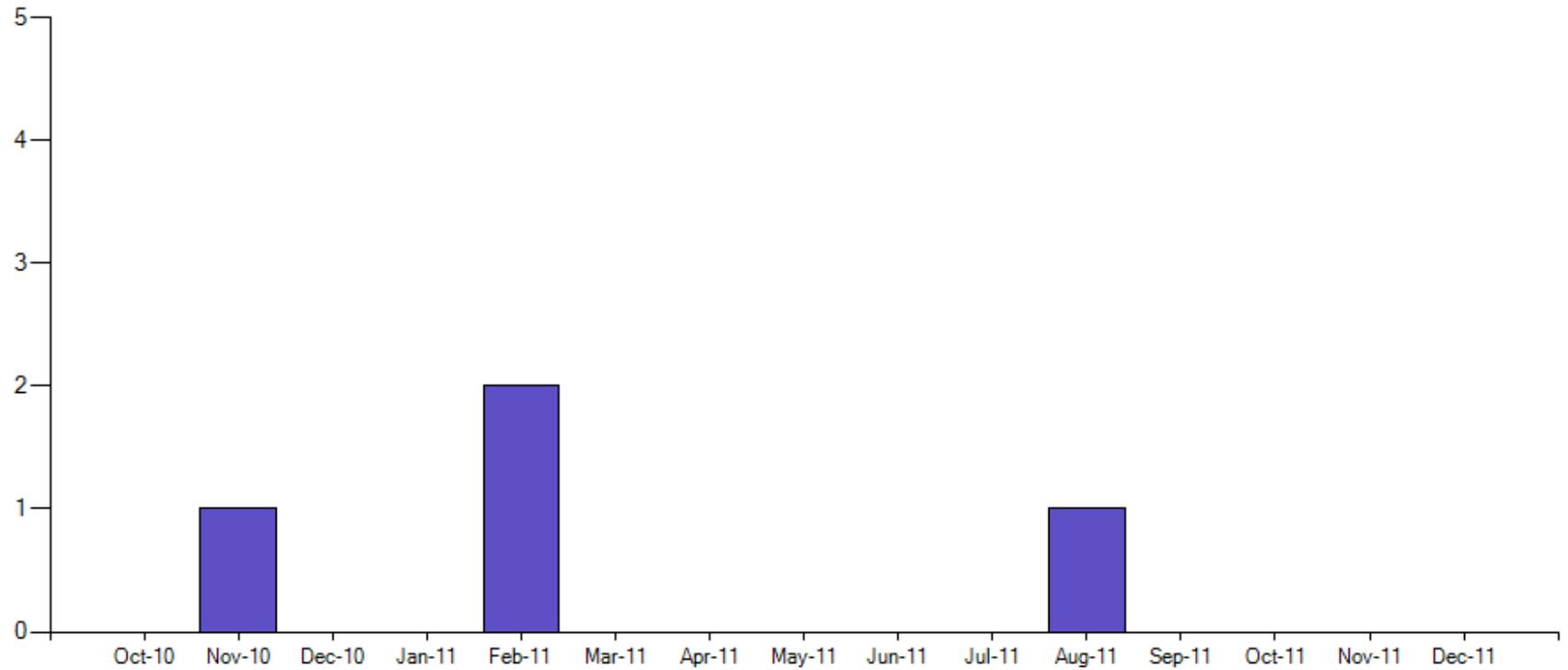
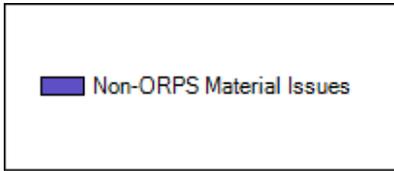
**Analysis:** Excellent **Color:** Blue  
**Current ORPS(6D3) Events:** None  
**Current Non-ORPS Errors:** None

**Action:** Star Third Tier Bin Items are being categorized with regard to ISMS Core Function. This process will support identification of areas of concern for review and address in response to these leading indicators. Performance continues to be acceptable and stable.

**Note:** Data prior to Oct 2011 is located on the Facility Metric page in the Historical Non-ORPS Percon Event Chart under the HISTORICAL header.

<b>Metric Details</b>	
Metric Title	Total ORPS & Non-ORPS PerCon Events/Cases
Metric Owner/Alternate Owner	Gordon Quillin 2-8389/Greg Tunno 2-8477
Metric SME/POC	Ellen Parrish 8-1027
Metric DOE PI Owner	Chuck Radford 2-8595
Metric Functional Group	RPD, DOE, ESH
Metric Description	Measures ORPS events & Non-ORPS PerCon errors 6D(3-4) & binned as FA 11.10.94 & 11.10.95 and the number of workers who were contaminated
Metric Definition	The monthly & Government FYTD rates are obtained by multiplying the number of ORPS events by 200,000 hrs & dividing by the number of applicable Rad Worker hrs. This chart reflects non-ORPS and ORPS reportable personnel contamination events/cases per month >500 dpm alpha or >5000 dpm beta-gamma. Beginning in Oct. 2008 we converted to an annual goal of $\leq 3.0$ events per 200,000 Rad Worker hrs.
Metric Value	Goal is measured in FYTD rate for ORPS events
Metric Reporting Frequency	Monthly
Metric Requirements Drivers	5Q, SCD-6, 5Q1.1-505, 1-01 4.4
Data Source(s):	STAR (events) and Hummingbird Database (RWP hrs)
Grade Criteria	Based on ORPS contamination events & RWP hours
<b>BLUE</b>	<1.5
<b>VIOLET</b>	> 1.5 - < 2.5
<b>GREEN</b>	$\geq 2.5 - \leq 5.0$
<b>YELLOW</b>	>5.0 - $\leq 7.5$
<b>RED</b>	> 7.5
Data Entry/Verification/Validation	Automatic pull from STAR & Hummingbird Database, PerCon cases entered by Site ALARA Coordinator
Data Inquiry	Please report any Scorecard technical issue to Raine Weimortz or Steve Rich or radiological related questions to Ellen Parrish

**EM Non-ORPS  
Radioactive Material/Contamination  
Radiological Protection  
Through December 31, 2011**



Title	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
Non-ORPS Material Issues	0	1	0	0	2	0	0	0	0	0	1	0	0	0	0
Offsite Discovery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Analysis:**

**Current Non-ORPS Events:** None

**Action:** SRS continues to use engineering controls to contain contamination at the source, performs MFO's in the field to assess the work area, and performs fact finding

meetings of spread of contamination or radioactive material.

<b>Metric Details</b>	
Metric Title	Non-ORPS Rad Material
Metric Owner/Alternate Owner	Gordon Quillin 2-8389/Greg Tunno 2-8477
Metric SME/POC	Ellen Parrish 8-1027
Metric DOE PI Owner	Chuck Radford 2-8595
Metric Functional Group	RPD, DOE, ESH
Metric Description	Tracks Non-ORPS reportable Rad Material errors 6B(5) & binned as FA 11.10.92. Off-Site events will be covered under 6B1 criteria.
Metric Definition	Radioactive material or spread of contamination found outside of radiological areas (includes RBAs not contiguous with a Contamination Area, Clean Areas, and Controlled Areas). Area Non-ORPS errors are leading indicators for Area ORPS events.
Metric Value	N/A
Metric Reporting Frequency	Monthly
Metric Requirements Drivers	5Q, SCD-6, 5Q1.1-505, 1-01 4.4
Data Source(s)	STAR
Grade Criteria	None
<b>BLUE</b>	N/A
<b>VIOLET</b>	N/A
<b>GREEN</b>	N/A
<b>YELLOW</b>	N/A
<b>RED</b>	N/A
Data Entry/Verification/Validation	Automatic pull from STAR & offsite event data entry by Site ALARA Coordinator
Data Inquiry	Please report any Scorecard technical issue to Raine Weimortz or Steve Rich or radiological related questions to Ellen Parrish



Rad Con Severity Index (FY)	1.59	0	0	0	0	0	0	0	0	0	0	0
Rad Con Severity Index (Month)	1.59	0	0	0	0	0	0	0	0	0	0	0
Rad Con Index Goal	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65	2.65
% Of Goal (Month)	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Score (Month)												

**Definition**

Radiological Contamination events are those that impact personnel or equipment. Each of these required reporting, tracking, evaluation and resolution due to the serious nature of such contamination. Rad Con events are scored based on assigned severity weighting:

STAR CAT 1,2,R = 10 pts

STAR CAT 3 /4 = 5 pts

Non ORPS = 1 pt

ORPS and Non-ORPS data for this metric is pulled from the STAR database. The database manager is Chip Patterson, in case of data integrity concerns.

This metric measures the monthly Rad Con Severity Index. The monthly Index is calculated by multiplying the monthly Rad Con Points by 200,000 hours and then dividing by the total monthly hours. The FY Index is determined by multiplying the number of Rad Con points by 200,000 hours and then dividing it by the total FY hours.

SRNS calculated the baseline on the 2008 SITE ORPS & Non-ORPS events for PerCons, Area Contamination events, and dose related events. The monthly hours for FY10 and FY11 were set based on the number of hours workers signed in on RWPs that tracked time. The FY12 monthly hours will be calculated each month from established queries using various databases to determine the number of radiological worker hours. The Rad Con severity index goal established for FY12 is 2.648.