



# 28<sup>th</sup> Annual National VPPPA Conference DOE Preconference Workshop

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## Leading Indicators and Scorecards

George J. Wisner, II  
ISMS Project Manager  
Savannah River Nuclear Solutions



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# Keeping Score using Automated Charts for Performance Improvement

## Facts about SRS

- Site covers 310 square miles.
- Site is a combination of both EM and NNSA
- Site is managed by multiple contractors
  - Savannah River Nuclear Solutions
  - Savannah River Remediation
  - Wackenhut
  - Parsons
  - Shaw-AREAVA Mox Services
  - University Of Georgia
  - Ameresco
- Approx. 12,000 Site Employees
- Home of SRNL (Savannah River National Laboratory)



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## *Keeping Score using Automated Charts for Performance Improvement*

- How did “Scorecard” come about.
  - In Fall of 2008 the web-based “Single Point Lockout/Tagout” application began using .Net Charting as a reporting tool.
  - Additional facility specific applications began using charting as a means of graphically representing performance.
  - Facilities asked for a web-based “Leadership Package” which would summarize the performance of various areas for use in management reviews.

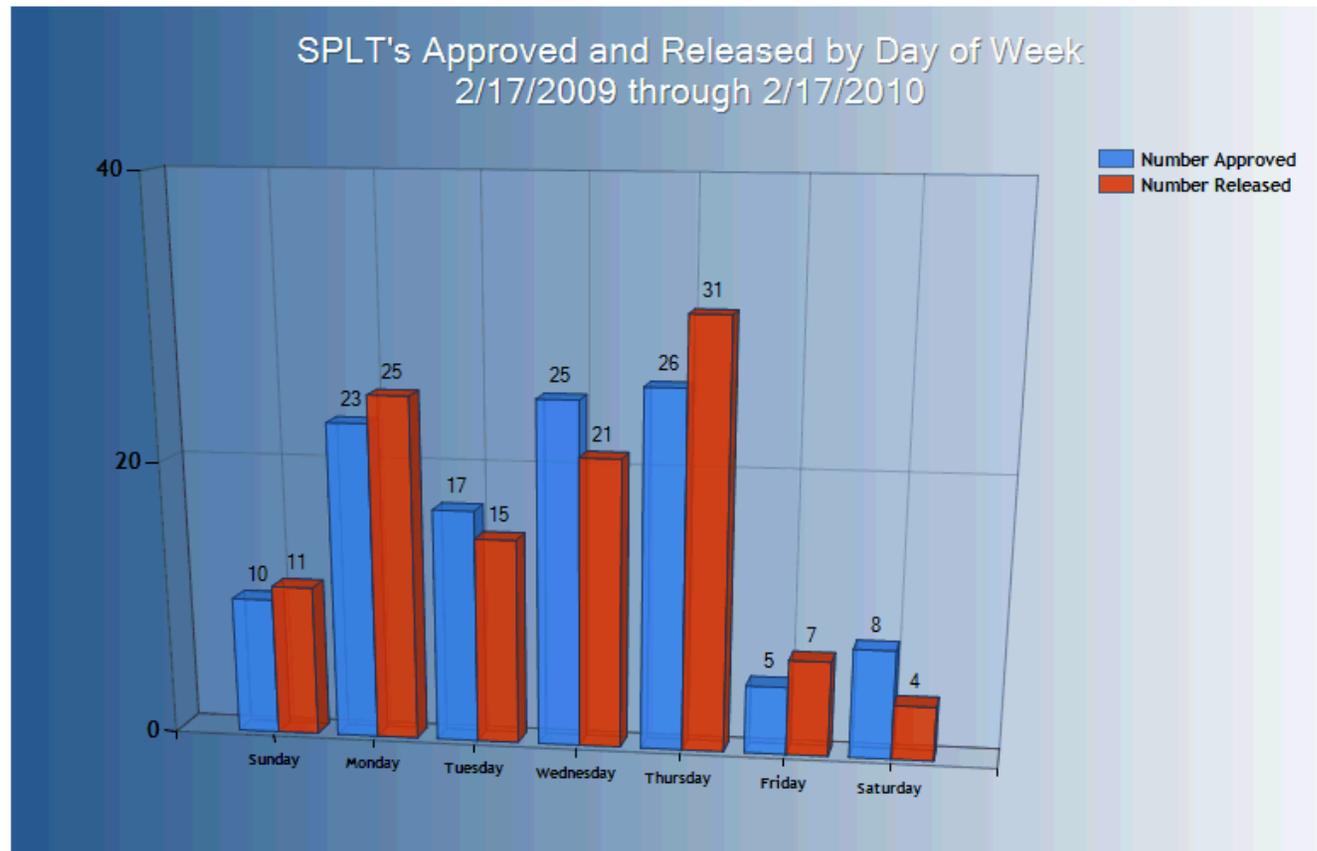


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# Keeping Score using Automated Charts for Performance Improvement

From  To   
 Last 365 Days  Last 180 Days  Last 90 Days



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## *Keeping Score using Automated Charts for Performance Improvement*

- What is a “Scorecard”?
  - “Stoplight” type performance view of areas defined as critical by SRNS management
  - Performance view at many levels
    - SRNS
    - Division
    - Department
    - Facility



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# Keeping Score using Automated Charts for Performance Improvement

## Savannah River Nuclear Solutions Score Card

Owner: Office of the President

Contacts Welcome: Trivett, Robert J Jr

- Category Types
- Maintain Categories
- Admin Users
- Admin Contacts & Parameters
- Duplicate Measured CDs

- Manage Facilities
- Manage Facility Roll-Up
- Admin Groups
- Record/Edit Measured Values
- Access Log

### Scorecards

ARRA Project  
 Business Services  
 Chief Financial Officer  
 Chief Information Officer  
 Engineering  
 ESH&Q  
 Infrastructure Services  
 NNSA Programs  
 Nuclear Materials Operations  
 Project Management & Construction  
 Savannah River Nuclear Solutions  
 SRNL  
 Workforce Services

Show Topics Under Development

	Nov	Dec	Jan	Feb
<b>Profit &amp; Loss Divisions</b>				
ARRA Project				
NNSA Programs				
Nuclear Materials				
SRNL				
<b>Support Divisions</b>				
Business Services				
Chief Financial Officer				
Chief Information Officer				
Engineering				
ESH&Q				
Infrastructure Services				
Project Management & Construction				
Workforce Services				
<b>Key Metrics</b>				
DUO Packaged				
DUO Drums Palletized				
DUO Rail Cars Loaded				
DUO Shipped Off Site				
Pad 1 Drums Removed				
F Canyon Drums Remediated				
H Canyon Containers Repackaged				
CH-TRU Dispositioned				
Pu Oxide / LAP Processing				
3013 NDE Performance				
3013 DE Performance				
WSB Project - CPI				
WSB Project - SPI				
WSB Project % Complete				
WSB Total Project Cost (TPC)				

Excellent
Very Good
Satisfactory
Marginal
Unsatisfactory

	Nov	Dec	Jan	Feb
<b>Operations Performance</b>				
DART Rate				
TRC Rate				
Safety Severity Index				
Security Severity Index				
ConOps Severity Index				
<b>Financial Performance</b>				
Actuals vs Budget				
ESS				
G & A				
Department Overheads				
Other Service Centers				
SRNS Overtime				
<b>Baseline Performance</b>				
Cost Performance Index				
Schedule Performance Index				
<b>PBI Performance</b>				
ARRA				
Nuclear Materials				
Chief Information Officer				
NNSA				
SRNL				
Infrastructure Services				
Management Comprehensive				

Re-Compute Scores



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# Keeping Score using Automated Charts for Performance Improvement

## Nuclear Materials Operations Score Card

Owner: Fred Dohse

Contacts Welcome: Trivett, Robert J Jr

- Category Types
- Maintain Categories
- Admin Users
- Admin Contacts & Parameters
- Duplicate Measured CDs

- Manage Facilities
- Manage Facility Roll-Up
- Admin Groups
- Record/Edit Measured Values
- Access Log

### Scorecards

ARRA Project  
 Business Services  
 Chief Financial Officer  
 Chief Information Officer  
 Engineering  
 ESH&Q  
 Infrastructure Services  
 NNSA Programs  
 Nuclear Materials Operations  
 Project Management & Construction  
 Savannah River Nuclear Solutions  
 SRNL  
 Workforce Services

Show Topics Under Development

Parent Scorecard

	Nov	Dec	Jan	Feb
<b>Operations Performance</b>				
DART Rate	Excellent	Excellent	Excellent	Excellent
TRC Rate	Unsatisfactory	Unsatisfactory	Satisfactory	Excellent
FAC Rate	Very Good	Very Good	Very Good	Very Good
Security Incident Rate	Excellent	Excellent	Excellent	Excellent
ORPS Rate	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
NMO Monthly Vehicle Utilization	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
<b>PBS 11 Financial Performance</b>				
Actuals vs Budget - H Canyon	Excellent	Excellent	Excellent	Excellent
Actuals vs. Budget - H B-Line	Marginal	Very Good	Satisfactory	Excellent
Actuals vs. Budget - K Area	Excellent	Excellent	Excellent	Excellent
Actuals vs. Budget - F Area	Excellent	Excellent	Excellent	Excellent
<b>PBS 11 Baseline Performance</b>				
CPI - H Canyon	Unsatisfactory	Very Good	Excellent	Excellent
SPI - H Canyon	Unsatisfactory	Satisfactory	Excellent	Excellent
CPI - H B-Line	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
SPI - H B-Line	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
CPI - F Area	Excellent	Very Good	Marginal	Excellent
SPI - F Area	Satisfactory	Satisfactory	Satisfactory	Satisfactory
CPI - K Area	Satisfactory	Satisfactory	Satisfactory	Satisfactory
SPI - K Area	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
<b>PBS 11 PBI's</b>				
HEU Processing	Excellent	Excellent	Excellent	Excellent
LEU Shipments	Excellent	Excellent	Excellent	Excellent
Pu Oxide / LAP Processing	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
3013 NDE Performance	Excellent	Excellent	Excellent	Excellent
3013 DE Performance	Excellent	Excellent	Satisfactory	Excellent

Excellent	Excellent
Very Good	Very Good
Satisfactory	Satisfactory
Marginal	Marginal
Unsatisfactory	Unsatisfactory

Nov Dec Jan Feb

	Nov	Dec	Jan	Feb
<b>Analytical Laboratories and F-Area</b>				
A-Labs	Satisfactory	Satisfactory	Very Good	Very Good
F-Area	Excellent	Excellent	Excellent	Excellent
<b>Nuclear Materials Storage</b>				
K-Area	Satisfactory	Satisfactory	Satisfactory	Excellent
L-Area	Very Good	Very Good	Satisfactory	Excellent
<b>Nuclear Materials Disposition</b>				
HB-Line	Very Good	Very Good	Very Good	Very Good
H-Canyon	Very Good	Very Good	Very Good	Very Good

### PBS 12 Financial Performance

Actuals vs. Budget - L Area	Excellent	Excellent	Very Good	Excellent
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### PBS 12 Baseline Performance

CPI - L Area	Excellent	Excellent	Excellent	Excellent
SPI - L Area	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory

### PBS 12 PBI's

Unload Foreign Reactor Casks	Satisfactory	Satisfactory	Satisfactory	Excellent
Unload Domestic Reactor Casks	Satisfactory	Satisfactory	Satisfactory	Excellent

### Other Financial Accounts

ESS-B Area Labs	Excellent	Excellent	Excellent	Excellent
DOH-Analytical Labs	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
OSC-F&H and EBL Labs	Excellent	Excellent	Excellent	Excellent

### Subjective PBI's

NM Stabilization Assessment - SRNS	Satisfactory	Satisfactory	Satisfactory	Excellent
NM Stabilization Assessment - DOE-SR	Excellent	Excellent	Excellent	Excellent

Re-Compute Scores



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# Keeping Score using Automated Charts for Performance Improvement

## HB-Line Score Card

Owner: Rick Burns

Contacts Welcome: Trivett, Robert J Jr

- Category Types
- Maintain Categories
- Admin Users
- Admin Contacts & Parameters
- Duplicate Measured CDs

- Manage Facilities
- Manage Facility Roll-Up
- Admin Groups
- Record/Edit Measured Values
- Access Log

### Scorecards

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 Chief Information Officer  
 Engineering  
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 Infrastructure Services  
 NNSA Programs  
 Nuclear Materials Operations  
 Project Management & Construction  
 Savannah River Nuclear Solutions  
 SRNL  
 Workforce Services

Show Topics Under Development

### Parent Scorecard

	Nov	Dec	Jan	Feb
<b>Safety</b>				
DART Rate	Excellent	Excellent	Excellent	Excellent
TRC Rate	Excellent	Excellent	Excellent	Excellent
FAC Rate	Excellent	Excellent	Excellent	Excellent
<b>Security</b>				
Incidents Rate	Very Good	Very Good	Very Good	Unsatisfactory
ECF Near Miss Rate	Excellent	Excellent	Excellent	Excellent
<b>Assessments</b>				
Assessments w/ Actions	Satisfactory	Satisfactory	Marginal	Marginal
BBS By LSIT	Very Good	Satisfactory	Very Good	Excellent
<b>Financial Performance</b>				
Actuals vs. Budget - H B-Line	Marginal	Very Good	Satisfactory	Excellent

Excellent
Very Good
Satisfactory
Marginal
Unsatisfactory

	Nov	Dec	Jan	Feb
<b>Facility Performance - Rick Burns</b>				
Safety Performance (FACs, MTCs)	Excellent	Excellent	Excellent	Excellent
Disciplined Ops	Very Good	Very Good	Very Good	Very Good
Assessment Participation	Excellent	Excellent	Excellent	Excellent
ORPS Events (Days Since)	Marginal	Marginal	Satisfactory	Satisfactory
<b>Facility Operations - Craig Anderson</b>				
Caution Tags	Excellent	Excellent	Excellent	Excellent
Information Tags	Excellent	Excellent	Excellent	Excellent
Warning Tags	Excellent	Excellent	Excellent	Excellent
UnSafe Condition Tags	Excellent	Excellent	Excellent	Excellent
Site Condition Tags	Excellent	Excellent	Marginal	Marginal
TSR's Surveillance Performance	Excellent	Marginal	Satisfactory	Satisfactory
HB-Line Temp Mods	Excellent	Excellent	Excellent	Excellent
<b>Procedures - Dean Fichtel</b>				
IPC/TIPC Performance	Excellent	Excellent	Excellent	Excellent
PCR Performance	Marginal	Marginal	Satisfactory	Satisfactory
<b>Quality - Larry Young</b>				
NCR Performance Indicator	Excellent	Excellent	Excellent	Excellent
Inspection Reports	Excellent	Excellent	Excellent	Excellent
<b>Training - Ronnie Rogers</b>				
HB-Line Continuing Training	Excellent	Excellent	Excellent	Excellent
No Shows	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory
Crew Administrative Checks	Very Good	Very Good	Very Good	Very Good
<b>Radcon Leading Indicators - Ruby Parks</b>				
Radcon Leading Indicators	Excellent	Excellent	Excellent	Excellent
<b>Waste Management - Pamela Allen</b>				
TRU Waste	Excellent	Excellent	Excellent	Excellent
TRU Waste Characterization Status	Excellent	Excellent	Excellent	Excellent
<b>EP Drills - Marc Williamson</b>				
EP Drills	Excellent	Excellent	Excellent	Excellent
EP Drills (Shift Performance)	Excellent	Excellent	Excellent	Excellent
<b>2S Drills - Alfreddie Williams</b>				
2S Drill Performance	Excellent	Excellent	Excellent	Excellent
<b>DCS Management - David Bugg</b>				
DCS/PLC Alarms	Marginal	Satisfactory	Satisfactory	Satisfactory
DCS / PLC Modification Management	Excellent	Excellent	Excellent	Excellent
<b>Maintenance - David Sanders</b>				
Total CM Maintenance	Excellent	Excellent	Excellent	Excellent



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## *Keeping Score using Automated Charts for Performance Improvement*

- How does a scorecard work?
  - Management defines critical areas to manage
  - Management sets performance expectation for each area (goals)
  - Scorecard extracts data from existing SRNS systems (live, weekly, monthly)
  - Scorecard measures data against pre-defined goals and assigns color
  - Scorecard quickly communicates performance at a glance
    - System is available to everyone in SRNS via the internet



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## *Keeping Score using Automated Charts for Performance Improvement*

- How does a scorecard work? (cont.)
  - Several charts can display details upon request
    - Allows in-depth analysis of metric
  - Significantly reduces the administrative time spent data mining, analyzing, and reporting
  - Clearly defines the performance objectives for all employees



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# Keeping Score using Automated Charts for Performance Improvement



Savannah River  
NUCLEAR SOLUTIONS™  
FLUOR • NEWPORT NEWS NUCLEAR • HONEYWELL

## POMC SCORECARD

WELCOME: WISNER, GEORGE J II

CONTACTS

### Scorecards

- Office of the President
- Support SVCS/Chief Business Officer
- Chief Financial Officer
- ESSH
- Corporate Services
- EM Operations
- NNSA Operations/Programs
- SRNL

#### Parent Scorecard

	May	Jun	Jul	Aug
<b>POMC Lagging Indicators</b>				
SRNS TRC	Green	Green	Green	Green
SRNS DART	Purple	Purple	Purple	Purple
M&O Quarterly Dose vs. Goal	Green	Green	Green	Green
Radiological Severity Index	Green	Green	Red	Green
SRNS Environmental Compliance Index	Blue	Blue	Blue	Blue
SRNS IMI 1 - 3	Green	Green	Green	Green
SRNS ORPS EM Index	Green	Green	Green	Green

#### Hide Scoring

SPC Specific Scoring	
Blue	(Trend) Improving trend (Stable) Baseline Avg is <= 50% goal
Purple	(Trend) One month away from an improving trend (Stable) Baseline Avg is > 50% and <= 75% goal
Green	(Stable) Baseline Avg is > 75% and <= 100% goal
Yellow	(Trend) One month away from a degrading trend (Stable) Baseline Avg is higher than goal
Red	(Trend) Degrading Trend

#### May Jun Jul Aug

	May	Jun	Jul	Aug
<b>POMC Leading Indicators</b>				
SRNS First Aid Case Rate	Green	Purple	Green	Green
BBS Total Observations	Blue	Blue	Blue	Blue
BBS Percentage Safe Behaviors	Blue	Blue	Blue	Blue
SRNS Employee Concerns (Safety)	Green	Green	Green	Green
SRNS Management Field Observations	Red	Blue	Blue	Blue
SRNS FA-11 Third Tier Bin Items	Blue	Blue	Blue	Blue
SRNS Non-ORPS Personnel Contamination Events	Green	Green	Green	Green
SRNS Non-ORPS Area Contamination Events	Blue	Blue	Blue	Blue
SRNS RWP Suspensions	Green	Green	Green	Green
SRNS Environmental Spills	Green	Purple	Purple	Green
SRNS IMI 4	Green	Green	Green	Green
SRNS Fact Findings	Blue	Blue	Blue	Blue

Designed & Maintained by Performance Reporting



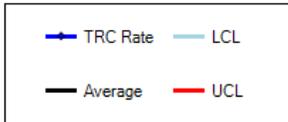
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# Keeping Score using Automated Charts for Performance Improvement

Return to Scorecard

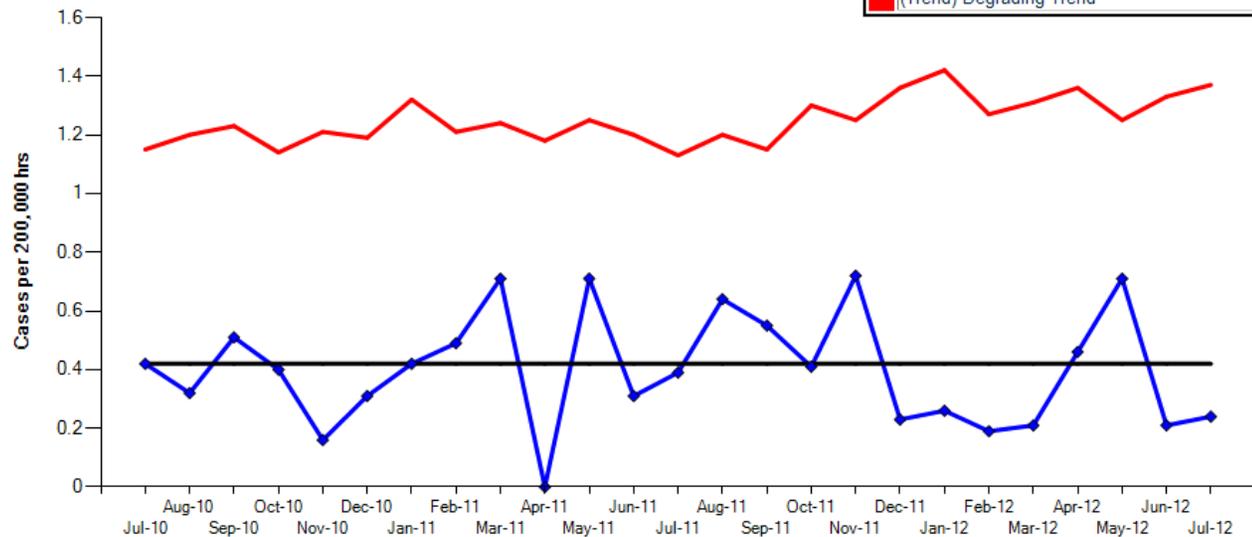
Date: 8/16/2012



**Savannah River Nuclear Solutions  
Total Recordable Case (TRC) Rate  
Through July 31, 2012**

Scoring Target

Blue	(Trend) Improving trend (Stable) Baseline Avg is <= 50% goal
Purple	(Trend) One month away from an improving trend (Stable) Baseline Avg is > 50% and <= 75% goal
Green	(Stable) Baseline Avg is > 75% and <= 100% goal
Yellow	(Trend) One month away from a degrading trend (Stable) Baseline Avg is higher than goal
Red	(Trend) Degrading Trend



Title	Jul-10	Aug-10	Sep-10	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	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12
TRC Rate	0.42	0.32	0.51	0.4	0.16	0.31	0.42	0.49	0.71	0	0.71	0.31	0.39	0.64	0.55	0.41	0.72	0.23	0.26	0.19	0.21				
Score																									
Status	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Title	Apr-12	May-12	Jun-12	Jul-12
TRC Rate	0.46	0.71	0.21	0.24
Score				



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# Keeping Score using Automated Charts for Performance Improvement

Return to Scorecard

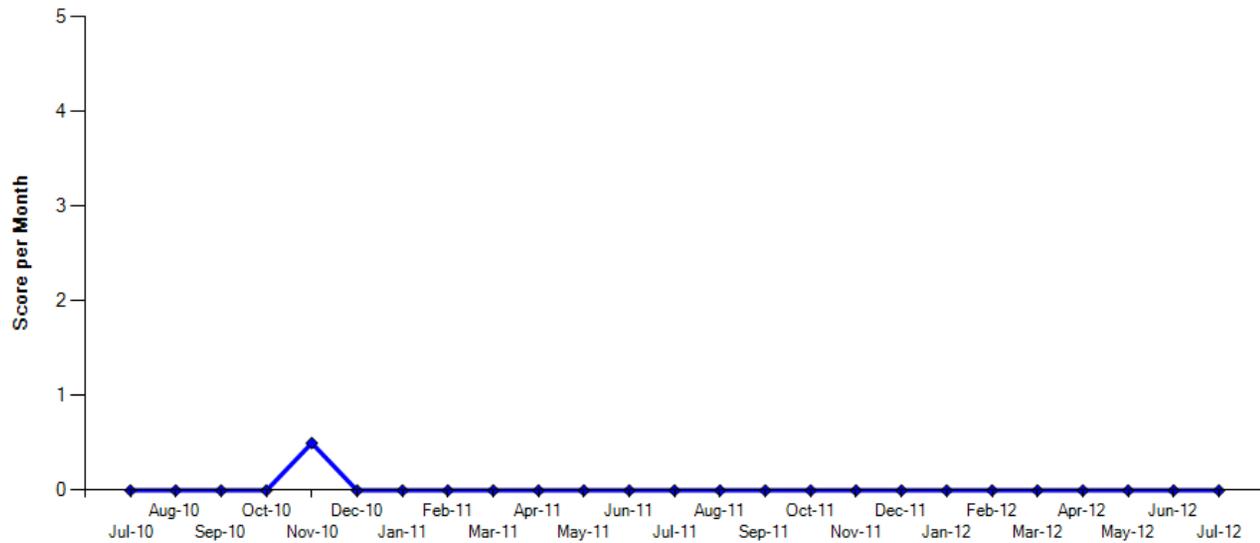
Date: 8/16/2012

◆ Incidents    — UCL  
— Average

## Savannah River Nuclear Solutions Environmental Compliance Index (ORPS Reporting Criteria 9) Through July 31, 2012

Scoring Target

■	(Stable) Baseline Avg is zero
■	
■	
■	Two events within 8 months of each other
■	(Trend) Degrading Trend



Title	Jul-10	Aug-10	Sep-10	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	Jan-12	Feb-12	Mar-12	
Incidents	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Score																						
Status	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Title			Apr-12	May-12	Jun-12	Jul-12																
Incidents			0	0	0	0																
Score																						



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# Keeping Score using Automated Charts for Performance Improvement

Return to Scorecard

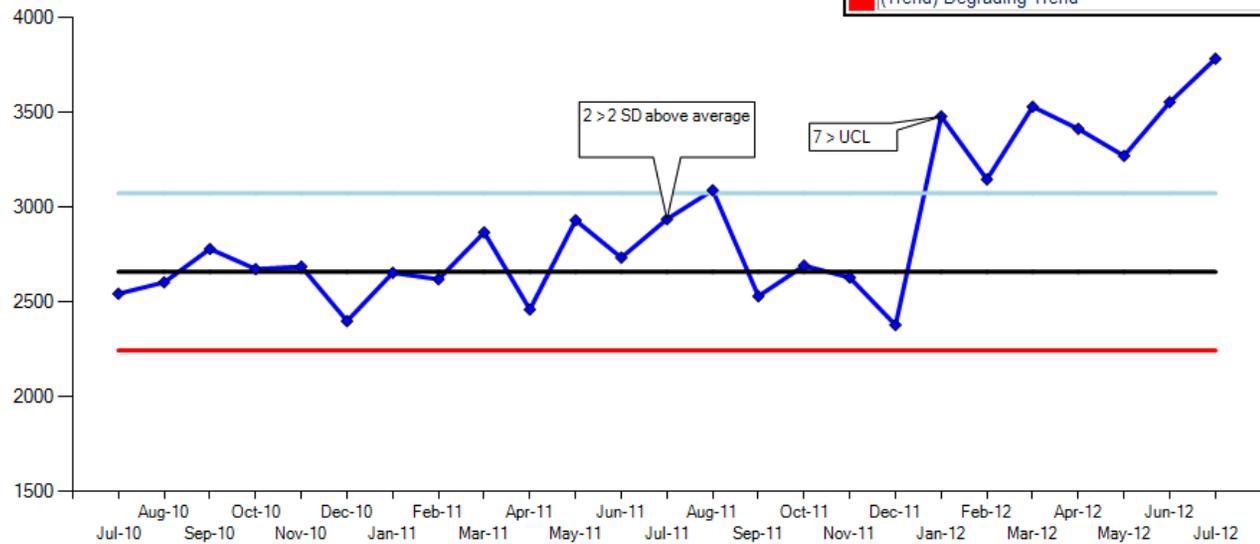
Date: 8/16/2012

- Number of Observations
- Average
- UCL
- LCL

**Savannah River Nuclear Solutions  
BBS Total Observations  
Through July 31, 2012**

**Scoring Target**

■	(Trend) Improving trend (Stable) Baseline Avg is > 200% goal
■	(Trend) One month away from an improving trend (Stable) Baseline Avg is >= 150% and <= 200% goal
■	(Stable) Baseline Avg is >= 100% and < 150% goal
■	(Trend) One month away from a degrading trend (Stable) Baseline Avg is lower than goal
■	(Trend) Degrading Trend



Title	Jul-10	Aug-10	Sep-10	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	Jan-12	Feb-12	Mar-12
Number of Observations	2544	2604	2780	2674	2687	2400	2654	2620	2867	2461	2931	2734	2937	3089	2531	2692	2629	2379	3478	3146	3529
Score																					
Status	3	3	3	3	3	3	3	3	3	3	3	3	4	5	4	3	3	3	5	5	5
Title			Apr-12	May-12	Jun-12	Jul-12															
Number of Observations			3412	3270	3553	3782															

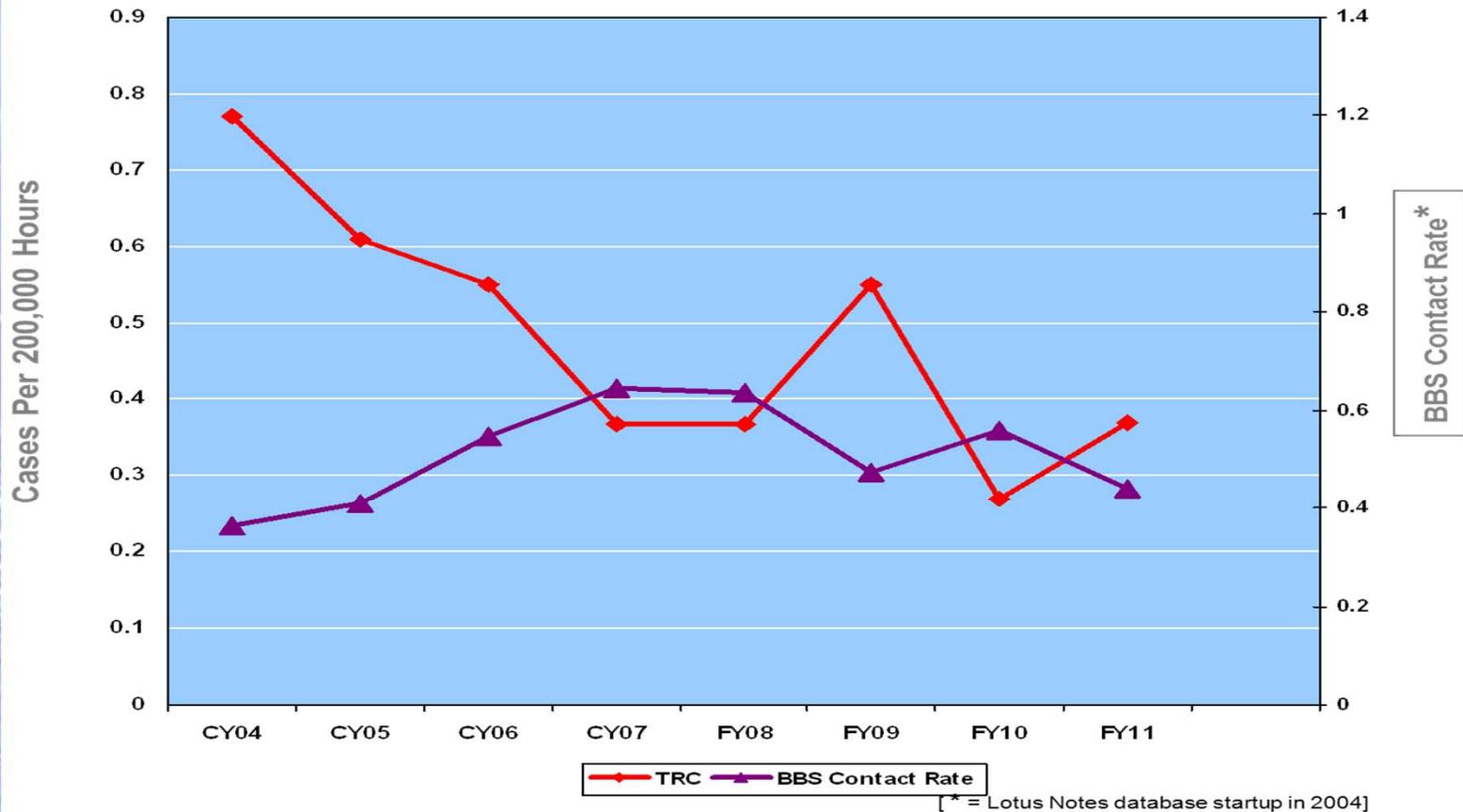


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# Keeping Score using Automated Charts for Performance Improvement

## BBS Contact Rate / TRC Rate



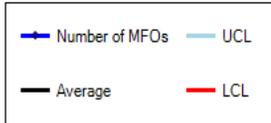
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# Keeping Score using Automated Charts for Performance Improvement

[Return to Scorecard](#)

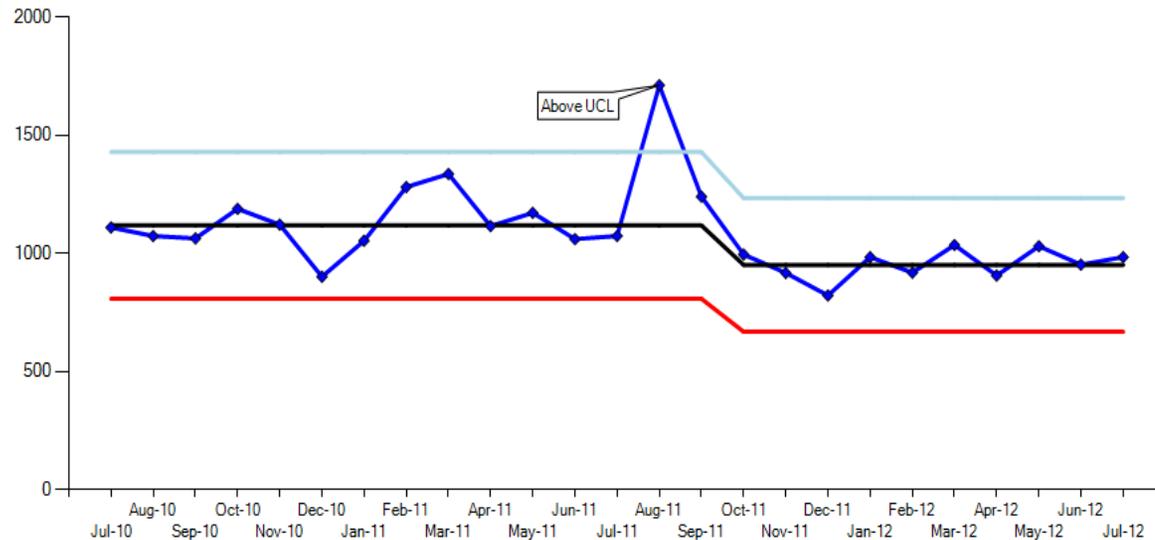
Date: 8/16/2012



**Savannah River Nuclear Solutions  
Management Field Observations  
Through July 31, 2012**

**Scoring Target**

<span style="color: blue;">■</span>	(Trend) Improving trend (Stable) Baseline Avg is $\geq$ 200% goal
<span style="color: purple;">■</span>	(Trend) One month away from an improving trend (Stable) Baseline Avg is $\geq$ 150% and $<$ 200% goal
<span style="color: green;">■</span>	(Stable) Baseline Avg is $\geq$ 100% and $<$ 150% goal
<span style="color: yellow;">■</span>	(Trend) One month away from a degrading trend (Stable) Baseline Avg is lower than goal
<span style="color: red;">■</span>	(Trend) Degrading Trend



Title	Jul-10	Aug-10	Sep-10	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	Jan-12	Feb-12	Mar-12	
Number of MFOs	1109	1073	1063	1188	1121	901	1053	1280	1335	1115	1171	1060	1073	1710	1239	995	917	822	984	918	1035	
Score																						
Status	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	2	1	1	1	1	
	Title		Apr-12	May-12	Jun-12	Jul-12																
	Number of MFOs		906	1030	952	984																



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## *Keeping Score using Automated Charts for Performance Improvement*

- Software used
  - Homegrown ASP .Net
  - Includes use of Microsoft .Net Charting Control
  - Uses SQL Server database backend
- Next Steps
  - DOE-SR encouraging expanding for all of the site operations.



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# *Keeping Score using Automated Charts for Performance Improvement*

Questions ???



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