Savannah River
Nuclear Solutions, LLC
A Fluor Daniel Partnership SM

START SMART – Worker Engagement At the Beginning of the Shift or Task

Bobby Hill

SRNS Paint Craft General Foreman

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ISM Summit

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Presenter Biography – Bobby Hill

- Paint Craft General Foreman for 13 years.
- 32 Years in the Paint Trade.
- Native of Aiken, South Carolina.
- School – Aiken High School, USC Aiken and Aiken Tech
- Family – Wife Debbie, 2 Daughters (Tiffany and Brittany) and 2 sons (Jamie and Chad.)
- Hobbies – Golf and Exercise.
- Die-hard fan of the South Carolina Gamecocks.

Introduction

Safe Performance Starts At The Beginning

- **Integrated Safety Management is about making safe performance the desired outcome of every task.**

- **A formal Hazards Analysis is conducted during the early planning stages.**

- **START SMART is an additional informal process at the work location designed to elicit Craft input and feedback**

History of the START SMART Card

DuPont, Bechtel, SRNS

- DuPont - STA (Safety Task Assignment)

- Bechtel Savannah River, Inc. - STARRT, or Safety Task Analysis and Risk Reduction Talk.

- Savannah River Nuclear Solutions (SRNS) - Start Smart.

START SMART Card

Personal Protective Equipment (PPE)
See CMP 11-1.1 and 8Q-61

	Yes	No
Head		
Hard Hat	☐	☐
Chin Strap	☐	☐
Hearing		
Ear Plugs	☐	☐
Ear Muffs	☐	☐
Eye / Face		
Safety Glasses w/Side Shields	☐	☐
Face Shield	☐	☐
Mono-Goggles	☐	☐
Chemical Goggles	☐	☐
Hand		
Leather Gloves	☐	☐
Chemical Gloves	☐	☐
Vibration Gloves	☐	☐
Welding Gloves	☐	☐
Arms / Body		
Full Length Sleeves	☐	☐
Cotton Coveralls	☐	☐
Leather Protection	☐	☐
Chemical Protection	☐	☐
Foot / Leg		
Toe Guards	☐	☐
Metatarsal Guards	☐	☐
Welding Boots	☐	☐
Rubber Boots	☐	☐
Snake Boots	☐	☐
Knee Pads	☐	☐
Chaps	☐	☐

Special Permits See Procedures 2Q-5.4, 8Q-33,32 and 5Q manual

	Yes	No
Hot Work	☐	☐
Confined Space	☐	☐
RWP	☐	☐
Lockout / Tagout	☐	☐
Jobsite Review Checklist	☐	☐

Employee Feedback / Comments

Employee Name	Initial

"START SMART" CARD – Rev. 3 - 2009
SRNS – M&O Construction

This planning document satisfies the requirement found in 10 CFR 851, Appendix A, Section 1, Construction, (d) for a written Construction Project Safety and Health Plan. The designated individual responsible for on-site implementation of the plan is:

Area Superintendent:

_____

Qualifications for Area Superintendents are contained in the Construction Training Document Description, E52TPD01

Supervisor:

_____

Date:

_____/_____/_____

Job Scope Description:

_____

_____

_____

Key Steps of Work

1._____
2._____
3._____
4._____
6._____
7._____

START SMART Card

Review and discuss the job scope and key work steps with work crew. Perform Jobsite Review Checklist. Identify all potential hazards and necessary safeguards.

Potential Worker Hazards

Worker Hazards 8Q-12 MRP 4.03 and CMP 11-1.1	Yes	No
Laceration / Puncture	☐	☐
Line of Fire	☐	☐
Pinch Points / Crushing	☐	☐
Manual / Heavy Lifting	☐	☐
Foot / Toe Crushing	☐	☐
Slipping / Tripping	☐	☐
Fall Potential	☐	☐
Falling Objects	☐	☐
Harmful Dust / Vapor	☐	☐
Flying Debris / Particles	☐	☐
Loud Noise Sources	☐	☐
Thermal Burns	☐	☐
Electrical / Static Shock	☐	☐
Heat / Cold Stress	☐	☐
Remote Worker MRP 4.03	☐	☐
Check Weather via SHRINE	☐	☐

Review and discuss the general safety requirements and controls that are required to perform work safely

General Safety Requirements

Hazardous Energy 8Q-32,36,10 and 18Q	Yes	No
Locked & Tagged	☐	☐
Electrical Isolated	☐	☐
System Depressurized	☐	☐
Blinds Installed	☐	☐

Hazardous Energy (cont.)	Yes	No
Line Break	☐	☐
Vented	☐	☐
Standby / Buddy Required	☐	☐
Overhead Line Hazards (Elect. / Piping etc)	☐	☐

Hazardous Material See procedures 3Q,2Q,5Q	Yes	No
Harmful Chemicals	☐	☐
Combustibles	☐	☐
Flammables	☐	☐
Paints / Solvents	☐	☐
Glove Bag / Leak Collection	☐	☐

Elevated Work See 8Q- 16, 61, 63	Yes	No
Ladder	☐	☐
Scaffold	☐	☐
Aerial Lift or Platform	☐	☐
Full Body Harness	☐	☐
Lifeline	☐	☐
Guardrails	☐	☐
Barricades	☐	☐
CAZ / Safety Monitor	☐	☐

Excavations / Penetrations See 8Q-34	Yes	No
Completed Checklist (OSR Form)	☐	☐
Interference Map / Drawing	☐	☐
Shored / Sloped	☐	☐
Proper Access (≤ 25 feet)	☐	☐
Atmospheric Testing Required	☐	☐

Welding / Cutting See Site procedures Y12,Y16,2Q	Yes	No
UV Flash Shields	☐	☐
Proper Grounds Installed	☐	☐
Combustibles Removed	☐	☐
Fire Blanket / Insulation	☐	☐
Sparks / Slag Contained	☐	☐
Fire Extinguisher	☐	☐
Fire Watch	☐	☐
Hot Work Permit	☐	☐

Equipment / Tools

See 8Q-10,103 and CMP 2-01.14

Equipment – See Haz. Energy for Ovrhd. Line Hazard

	Yes	No
Crane/Excavator/Backhoe	☐	☐
Forklift	☐	☐
JLG / Scissors Lift	☐	☐
Man Basket	☐	☐
Rigging Equipment	☐	☐
Dump Truck	☐	☐
Other Type of Equipment:		

Tools See 8Q-117	Yes	No
GFCI	☐	☐
Drill Stop	☐	☐
Electrical Grounding	☐	☐
Power Tools	☐	☐
Hand Tools	☐	☐
Proper Guards	☐	☐
Manufacturer Instructions	☐	☐
Special Training	☐	☐
Grounding	☐	☐

Start Smart Card Explained

- Vital Information (Area Superintendent, Supervisor, Job Scope Description, Key Steps of Work.)
- Potential Worker Hazards (ISM - Analyze the Hazards)
- General Safety Requirements (ISM – Hazard Controls)
- Equipment / Tools
- Personal Protective Equipment
- Special Permits
- Employee Feedback and Comments
- Employee Names / Initials

START SMART Jobsite Review Checklist

"Start Smart"
Jobsite Review Checklist

Revision Date: 7/29/2009

Work Order / Task Number _____

Jobsite Review _____ Name of Reviewer Date _____

Jobsite Review _____ Name of Reviewer Date _____

Jobsite Review _____ Name of Reviewer Date _____

Jobsite Review _____ Name of Reviewer Date _____

Jobsite Review _____ Name of Reviewer Date _____

Jobsite Review _____ Name of Reviewer Date _____

Conduct a thorough review of the work area and surrounding environment prior to completing the following section.
Note: During the review consider the indirect and support type of work in addition to the main scope/task.
Examples include material handling/staging, job set up, temp containment, construction ventilation, survey/layout, temp power/lighting, temp rigging/tie-off, ladders, scaffolding, manlifts, housekeeping, clean up, etc.

Based on the work to be performed and review of the work area, determine if any of the following facility equipment/systems or situations exist in the surrounding environment. For each "Yes" response ensure that the issue or situation has been addressed and communicated to all workers prior to commencing with work activities.

Air or ventilation system intake or exhaust vent that could be blocked.	Yes	No
Air or ventilation system intake that could be affected by introduction of exhaust fumes from temporary construction equipment.	Yes	No
Facility equipment or personnel could be affected by introduction of exhaust fumes, dust, or debris from construction work activities.	Yes	No
Facility equipment or personnel could be affected by introduction of off gas fumes from construction work activities involving paints and/or chemicals.	Yes	No
Laser type fire detection system that could be activated inadvertently.	Yes	No
Smoke detector type of fire alarm that could be activated inadvertently.	Yes	No
Facility monitoring systems that could be activated inadvertently (i.e. NIMs, Security Alarms, Radiological Detectors, Air Monitors, etc.).	Yes	No
Electrical switches (electrical eqpt, fans, control panels, etc.) that could be tripped inadvertently.	Yes	No
Eyewash stations or safety showers that could be activated inadvertently.	Yes	No
Instruments or equipment that could be damaged during hot work (welding, grinding, torch cutting, etc.).	Yes	No
Control room alarms that could be inadvertently activated during electrical hot work.	Yes	No
Inadequate work access that could lead to standing on permanent plant equipment to perform work.	Yes	No
Inadequate rigging or tie-off points that could lead to rigging or tie-off from permanent plant equipment.	Yes	No
Congested work area that could lead to damage of equipment while climbing ladder or scaffold to access the work area.	Yes	No
Congested work area that could lead to damage of equipment while erecting ladder or scaffold.	Yes	No
Congested work area that could lead to damage of equipment from vehicle, crane, or forklift access or egress.	Yes	No
Equipment adjacent to D&R activities that could be damaged inadvertently.	Yes	No
Equipment adjacent to or within excavation area that could be damaged inadvertently.	Yes	No
Process system access (aka Line Break) that could result in an inadvertent liquid waste spill.	Yes	No
Overhead electrical or piping lines that could be contacted or damaged inadvertently.	Yes	No
Normal access or egress paths that could be narrowed or blocked.	Yes	No

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START SMART Job Site Review Checklist

- Background
- When to Use
  - During the work package planning walkdown
  - Upon arriving at the physical work location
  - Prior to interaction with facility equipment
  - During the field walkdown of a work package
  - After extended breaks or interruptions (lunch, shift change, weekend, etc.)
- START SMART Practices
  - Explore the job site
  - Talk with the supervisor, field engineer, and/or facility personnel
  - Eliminate, mitigate or minimize hazards

START SMART Job Site Review Checklist (continued)

At-Risk Practices To Avoid

- Hurrying, not taking the time to look around the job site
- Thinking that “routine” or “simple” means “no risk
- Believing nothing bad can happen
- Not talking about hazards or precautions with coworkers
- Not talking about “gut feelings”
- Not asking questions when unsure

Summary

- START SMART is a way to engage Craft workers at the face of the work where tasks and hazards are more easily identifiable and understood. This promotes ownership in the safety program by all Craft workers.

- START SMART helps ensure compliance with site safety policies and procedures, thereby reducing the likelihood of incidents and injuries.