

# Pre-Job ALARA Checklist

ALARA Review No./Revision No.	Review Date	RWP No.
12-FTF-123	2-28-2012	12-FTF-123

Job Description

Tank 18 Grout Pour

Work Package: 01087939 Grout Tank Fill (Task 16) and Equipment/Riser Fill (Task 17)

AHA: TF 2278

## ALARA TRIGGER LEVELS

- |   |  |
|---|--|
| <input type="checkbox"/> Infrequent/First Time Activity       | <input type="checkbox"/> Predicted Airborne Levels >200 DAC-hr   |
| <input type="checkbox"/> Individual Dose > 50% of ACL         | <input type="checkbox"/> Potential for Environmental Release Exists  |
| <input type="checkbox"/> Total Man-Rem Dose > 1 rem           | <input type="checkbox"/> Removable Contamination Levels > 100,000 dpm/100cm <sup>2</sup> α for transuranics,<br>250,000 dpm/100cm <sup>2</sup> α for uranium and/or > 10 mrad βγ |
| <input type="checkbox"/> Entry Where Dose Rate > 1 rem/hr     | <input type="checkbox"/> Other _____   |
| <input type="checkbox"/> Skin/Extremity Dose Rate > 10 rem/hr |  |

## Section I: Administrative and Pre-Job Walkdown Information

### 1. Extensive Pre-Job Planning: (Check those that apply) N/A

☐ Mock-ups ☐ Specialized Training ☐ Other ALARA Review

### 2. Contingency Plans: (Check those that apply) N/A

☐ Work Plan Failure ☐ Loss of Breathing Air ☐ Security Measures ☐ Other Use of Time Out w/Notifications  
☐ Remote Worker ☐ SNM ☐ Fire Alarm

### 3. Radiological Alarms: (Check those that apply) N/A

☐ EPD ☐ CAM ☐ ARM ☐ NIM ☐ TAM ☐ Other Purge Air Sampler per 5Q1.5 314

### 4. Spill/Release Pathways: (Check those that apply) N/A

☐ Storm Drains ☐ Floor Drains ☐ HEPA Filters ☐ System Breaches ☐ Other Hay bails around Storm Drain  
☐ Ditches ☐ Stacks ☐ Tank Openings ☐ Containment

### 5. Pre-Job Briefing Data: (Check those that apply) N/A

<input type="checkbox"/> VSDS	<input type="checkbox"/> Drawings/Sketches	<input type="checkbox"/> Injury Response	<input type="checkbox"/> Rescue Plan
<input type="checkbox"/> Air/Soil Sampling Plan(s)	<input type="checkbox"/> Dose Profile	<input type="checkbox"/> Photos	<input type="checkbox"/> Other <u>TWD</u>
<input type="checkbox"/> Emergency Phone Number _____	<input type="checkbox"/> Videos	<input type="checkbox"/> Special Tools	
<input type="checkbox"/> RWP	<input type="checkbox"/> Workers Allowable Dose	<input type="checkbox"/> Rally Points	

## Section II: Job Planning/ALARA/Radiological Considerations

### 6. Engineering Controls: (check those that apply)

Ventilation: ☒ N/A

<input type="checkbox"/> Adequate Fan Configuration	<input type="checkbox"/> Planned Fan Manipulations	<input type="checkbox"/> Spark Arrestor
<input type="checkbox"/> Facility Ventilation	<input type="checkbox"/> Localized Ventilation	<input type="checkbox"/> Other <u>Hut</u>
<input type="checkbox"/> Airflow Verification	<input type="checkbox"/> Supplemental Ventilation	

Containment: ☒ N/A

<input type="checkbox"/> Pre-Fab Hut	<input type="checkbox"/> Tube-Lok Hut	<input type="checkbox"/> Leak Collection Device	<input type="checkbox"/> Sleeving
<input type="checkbox"/> Reusable Hut Panel	<input type="checkbox"/> False Inner Wall	<input type="checkbox"/> Windbreak	<input type="checkbox"/> Radiobench/Hood
<input type="checkbox"/> Layered Paper/Plastic	<input type="checkbox"/> Deployment Device	<input type="checkbox"/> Polybottle	<input type="checkbox"/> Glovebox
<input type="checkbox"/> HEPA Filtered Sleeving	<input type="checkbox"/> Glovebag	<input type="checkbox"/> Launderable Tarp	<input type="checkbox"/> Other _____

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### Section II: Job Planning/ALARA/Radiological Considerations (Continued)

#### 7. Monitoring Equipment: (Check those that apply) ☐ N/A

- |   |  |  |   |
|---|--|--|---|
| <input checked="" type="checkbox"/> Teletrax          | <input type="checkbox"/> CRM/PCM                 | <input checked="" type="checkbox"/> EPD                    | <input checked="" type="checkbox"/> Other <u>Exhaust Stack Sampling</u> |
| <input type="checkbox"/> Personal Air Sampler         | <input type="checkbox"/> High Volume Air Sampler | <input checked="" type="checkbox"/> Low Volume Air Sampler |   |
| <input type="checkbox"/> Battery Operated Air Sampler | <input type="checkbox"/> Kanne/Scintrex/TAM      | <input type="checkbox"/> CAM                               |   |
| <input type="checkbox"/> ARM                          | <input type="checkbox"/> Effluent Monitoring     | <input type="checkbox"/> Environmental Monitoring          |   |

#### 8. Additional Hazards: (Check those that apply) ☐ N/A

- ☐ Punctures ☒ Heat Stress ☐ Cold Stress ☒ Other Reference AHA & S-CHA-F-000010

#### 9. Waste Minimization: (Check those that apply) ☐ N/A

- |  |   |
|--|---|
| <input type="checkbox"/> Recycling                             | <input type="checkbox"/> Generate Tool List                                     |
| <input checked="" type="checkbox"/> Remove Packaging           | <input checked="" type="checkbox"/> Staging Area in Non-Radiological Area       |
| <input type="checkbox"/> Reuse of Contaminated Equipment/Tools | <input type="checkbox"/> Clean Areas w/Rad History or Adjacent to Rad Area      |
| <input checked="" type="checkbox"/> Generate Material List     | <input checked="" type="checkbox"/> Other <u>Reuse of Hut for multiple jobs</u> |

#### 10. Survey/Dose Reduction Techniques

##### Source Reduction: (Check those that apply) ☐ N/A

- |  |   |   |  |
|--|---|---|--|
| <input type="checkbox"/> Relocation of Source      | <input type="checkbox"/> Blue Fog       | <input type="checkbox"/> Exterior Flush | <input type="checkbox"/> Fixative Coating                                |
| <input type="checkbox"/> Flooding                  | <input type="checkbox"/> Interior Flush | <input type="checkbox"/> Hydro Seeder   | <input type="checkbox"/> Pre-Job Decon                                   |
| <input type="checkbox"/> Passive Aerosol Generator | <input type="checkbox"/> Decon Tank     | <input type="checkbox"/> Post Job Decon | <input checked="" type="checkbox"/> Other <u>LEAD BLANKETS AS NEEDED</u> |

Comment Grout to be transferred into the tank via a fill line (e.g., slick line into riser down through a line known as a tremie).

##### Dose Reduction: (Check those that apply)

###### Remote Tools: ☒ N/A

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> Camera | <input type="checkbox"/> Power Tools   | <input type="checkbox"/> Manipulators                            |
| <input type="checkbox"/> Portable Tools    | <input type="checkbox"/> Remote Cutter | <input type="checkbox"/> Extended Tools                          |
| <input type="checkbox"/> Robotics          | <input type="checkbox"/> Binoculars    | <input checked="" type="checkbox"/> Other <u>Concrete Trucks</u> |

Comment Grout mixed in a hopper and pumped through a slick line into a riser down through a tremie.

###### Shielding: ☒ N/A

- |   |   |  |  |
|---|---|--|--|
| <input checked="" type="checkbox"/> Lead Blankets | <input type="checkbox"/> Apron (lead/non-lead)    | <input type="checkbox"/> Rad Clad                | <input type="checkbox"/> Lexan                                   |
| <input type="checkbox"/> Shielded Monitor Station | <input type="checkbox"/> Vinyl Lead X             | <input type="checkbox"/> Non-Lead Shielding      | <input checked="" type="checkbox"/> Other <u>Monitoring Plan</u> |
| <input type="checkbox"/> Water Filled Shielding   | <input type="checkbox"/> Temporary Shielding Wall | <input type="checkbox"/> Tungsten Gloves/Sleeves |  |

Comment \_\_\_\_\_

###### Techniques: ☐ N/A

- |   |  |   |
|---|--|---|
| <input checked="" type="checkbox"/> Maximize Distance From Source | <input checked="" type="checkbox"/> Pre/Partial Assembly | <input checked="" type="checkbox"/> Prep Area |
| <input checked="" type="checkbox"/> Identify Low Dose Area        | <input checked="" type="checkbox"/> Pre-Stage Equipment  | <input type="checkbox"/> Other _____          |

Comment \_\_\_\_\_

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## Section III: Comments/Recommendations

This work activity was reviewed for FRAT approval by the RCO Deputy Manager and ALARA Coordinator. This work activity doesn't require a FRAT review. 1) Job Planning:

- a) Other Reviews: AHA & S-CHA-F-00010 were completed. A mockup/ demonstration of pumping of grout was completed.
- b) Grout Mitigation Plan approved

2) Contingency Plan: a) The use of the Time Out program will be used with notifications provided with conditions.

3) Radiological Alarms: a) EPD's will be set for the Dose Rate & the Dose Received of 100 mrem (reference the RWP).

4) Spill/Release Pathways a) Open Riser Controls as follows:

- Control is the Tank Ventilation as the primary ventilation unit and Supplemental unit installed on instlled unit duct and Operation of each system is controlled via the work instructions. A localized unit for equipment/riser fill.

5) Pre-Job Briefing Required: Reference Procedure (S4 OPS-SO-LWO.01) (e.g., Previous Surveys, Rad Survey/Monitoring Plan, RWP, allowed individual dose, photos and/or Drawings of equipment for Grouting and the TWD will be covered.

6) Engineering Controls: (reference Work Instructions for the following controls) a) Certified Hut for each riser will be used.

- Tank or Supplemental Ventilation in operation with Airflow checks and Localized Unit for Equipment/Riser Fill will be used
- Supplemental HEPA Unit will be installed on the installed sytem duct, during Tank fill will be installed.
- Certified Hut (with a removable roof) includes a Containment Deviation to remove roof to allow crane access for removal of equipment for each riser.

d) Sleeving for staging of slick line and plastic floor in the hut will be used.

e) Hammer valve to isolate slick line at the end of a grout pour (e.g., after pig run to clear line) will isolate the vapor space

f) Polybottles with a HEPA filter will be installed on the riser vent line during the riser/equipment grout fill.

7) Monitoring Equipment:

- a) Low Volume Air Sampling per Air Sampling Strategy and staged per Rad Monitoring Plan (HPT)
- b) PAS sampling as directed by RCO.
- c) EPD's per RCO direction see RWP for personnel and EPD's will be setup at HEPA Unit and Tracked via TeleTrac.
- d) Cameras installed and will be utilized per the Monitoring Plan # SRR-CES-2012-00008.
- e) Rad Surveys per work instructions (e.g., RCO Action Steps) and per the RAD Survey Strategy and RAD Survey Plan
- f) Additional FARMS Air Samplers will be setup monitoring for Air Activity.
- e) Source Sampling will be used in each hut vs Representative Sampling (Filter Papers checked a minimum of each shift)

8) Additional Hazards

- a) Reference AHA & S-CHA-F-00010 for additional hazards and their respective controls.
- b) Additional Controls may include the following: Popup Tents available, Mister Fans, etc. and AC units on each hut.

9) Waste Minimization: a) Huts were installed for Grout Preps and Actual Grout Pour and used for multiple jobs.

- b) The Work Package to include a materials list.
- c) Remove any packaging from equipment prior to entering CA when possible to minimize LLW.
- d) The grout mixing is in a Controlled Area. The Grout will be pumped via the slick line from the Controlled area to the Tank and dispensed through the tremie. See Work Package instructions.

10) Survey/Dose Reduction

- a) Reference Rad Survey Strategy
- b) Technique: RCO to identify low/high dose areas and establish rates per RCO ACTION STEPS in the work package.
- c) Cameras installed in tank to monitor level of grout per approved Monitoring Plan # SRR-CES-2012-00008.
- d) Trucks transporting grout mixture and empty into hopper and then the grout will be pumped through a slick line and tremie which will direct the grout into the tank
- e) Lead Blankets currently installed in specified areas and available to be installed per RCO directions.

Other:

- a) Command Post will be staged to direct work activities
- b) PIC to maintain a log book and to utilize the PIC Turnover checklist. The PIC will make contact with the SOM at the end of the shift with turnover based on the work schedule (TBD).
- c) Engineering to monitor the grout fill and determine when the tank is full of grout. (Reference Work Instructions for engineering evaluation) prior to each Grout Pour.

Lead Work Group Manager/Designee (Signature)	Date	ALARA Coordinator (Signature)	Date
<i>[Signature]</i>	3-1-12	<i>[Signature]</i>	3-1-12
Radiological Protection FLM/Designee (Signature)	Date	Planner (Signature)	Date
<i>[Signature]</i>	3-1-12	<i>[Signature]</i>	3-1-12
Additional (Title/Signature)	Date	Additional (Title/Signature)	Date

Attach Original to RWP or TWD