

WP 04-AD3030

Revision 1

Pre-Job and Post-Job Reviews

Management Control Procedure

EFFECTIVE DATE: 02/08/11

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APPROVED FOR USE

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CHANGE HISTORY SUMMARY

REVISION NUMBER	ISSUE DATE	DESCRIPTION OF CHANGES
1	02/08/11	Added two references, WP 04-CO.01-2 and WP 12-IS.03 Added in various steps the electrical pre-job information and in Attachment 3, 7B. Added Step 2.4 Electrical Pre-Job Briefing and bullets Added Attachment 6, WTS ISM Pre-Job Brief Template

INTRODUCTION^{1,2}

This procedure defines the methods for previewing work activities to prepare for their performance and to review activities to capture lessons for future work. These processes are applicable for work performed at the Waste Isolation Pilot Plant (WIPP) and other WIPP-related workplaces covered by Title 10 *Code of Federal Regulations* (CFR) 851.

This procedure is applicable to activities of Washington TRU Solutions, LLC (WTS) personnel and WTS subcontractor personnel that work at the WIPP site or other associated project sites, such as the Central Characterization Project (CCP).

The purpose of the pre-job review is to help personnel perform work in a safe and efficient manner by focusing on the specific task, other personnel, environment, hazards, and controls applicable today. The methods for conducting the reviews are graded, based upon complexity, the amount of risk associated with improper performance, and the degree of familiarity personnel have with the activity. Thus simple/repetitive and low risk activities have the least rigorous pre-job review, and infrequent, high-risk activities have the most rigorous reviews developed specifically for that activity.

A pre-job review is a meeting of employees and supervisors conducted before performing a job to discuss the tasks involved, hazards, and related safety precautions. Participants clarify the task's objectives, roles and responsibilities, and resources, such as what to accomplish. Knowing clearly what you are trying to do improves error recognition. Similarly, precautions, limitations, hazards, critical steps, controls, contingencies, and relevant operating experience are addressed, such as what to avoid. Pre-job reviews help personnel avoid surprises in the field and reinforce the idea that there are no "routine" activities.

The techniques for pre-job review are:

- Task preview (simple or repetitive, low risk activities);
- Tailored pre-job briefing (simple, repetitive, high risk activities);
- Standard pre-job briefing (complex and/or infrequent, low risk activities);
and
- Walkdown/Dry Run/Mockup Training (complex and/or infrequent, high risk activities)

The purpose of a post-job review is to capture lessons (positive and negative) from the performance of the job, which contributed to its safety, quality, and efficiency; such that these lessons can be applied to future work. Responsible managers shall determine when a post-job review will be performed.

Records generated as a result of performing this procedure will be maintained in accordance with departmental Records Inventory and Disposition Schedule (RIDS).

Performance of this procedure may generate the following records, as applicable:

- Attachment 2, Pre-Job Briefing Form
- Attachment 6, WTS ISM Pre-Job Brief Template
- Attachment 7, Post-Job Review Form

REFERENCED DOCUMENTS

BASELINE DOCUMENTS

- Title 29 CFR Part 1910, "Occupational Safety and Health Standards"
- 10 CFR 851, "Worker Safety"
- DOE-HDBK-1028-2009, *Human Performance Improvement Handbook*

REFERENCED DOCUMENTS

- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- WP 04-CO.01-2, Conduct of Operations Program – Shift Routines and Operating Practices
- WP 04-IM1000, Issues Management Processing of WIPP Forms
- EA04IM1000-1-0, WIPP Form
- WP 10-WC3011, Maintenance Process
- WP 12-IS.03, Electrical Safety Program Manual

PRECAUTIONS AND LIMITATIONS

- Pre-job task preview or briefings, at the discretion of the responsible manager, may be performed for applicable field operations and maintenance activities. The type of review shall be determined by the complexity, frequency, and risk of the activity, as described below. (Refer to WP 04-CO.01-2, Conduct of Operations Program – Shift Routines and Operating Practices.)

- Pre-job briefings will be conducted by the cognizant individual before evolutions that are new or complex in nature, and/or when proficiency at the task is questioned, and/or prior to any evolution that will require modification of safety class or safety significant equipment listed in DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis (DSA)* or DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements (TSR)*. This will ensure the evolutions will be conducted properly and safely.
- Post-job reviews will be conducted at the discretion of the responsible manager. The value of positive and/or negative lessons to be applied to future or ongoing activities should be the major consideration.
- Personnel familiar with the review process, work environment, affected systems, task, hazards, controls, tools and equipment involved will lead pre-job and post-job reviews.
- All steps in this procedure are performed by the person designated to conduct the review, unless otherwise noted.

PERFORMANCE

1.0 PRE-JOB REVIEW SELECTION

- 1.1 Cognizant Manager, designate personnel to conduct the selected pre-job review.

NOTE

Attachment 1, Pre-Job Review Selection, provides general guidance for selecting the type of pre-job review.

- 1.2 Cognizant Manager/Person Conducting Review, evaluate the job frequency, complexity, and risk.
 - 1.2.1 Categorize task frequency as one of the following:
 - Frequent/repetitive: tasks that are performed often enough for the personnel performing the task to maintain a high level of proficiency.
 - Infrequent: tasks that are not performed often enough for the personnel performing the task to maintain a high level of proficiency.

1.2.2 Categorize task complexity as one of the following:

- Simple: activities that generally require a series of sequential, non-time sensitive activities conducted by a limited number of people with little support.
- Complex: activities that involve one or more of the following:
 - Multiple work groups or large number of workers
 - Critical sequence or timing of activities
 - Simultaneous activities or use of multiple procedures
 - Major changes in equipment or system condition
 - Unusual system or equipment configurations

1.2.3 Categorize task risk as one of the following:

- Low-risk: activities that do not involve personnel health, environment, or financial risks, as noted below for high-risk activities.
- High-risk: activities that include one or more of the following:
 - Industrial and/or radiological hazards that seriously threaten personnel health
 - Handling or working in the vicinity of a hazardous substance, material, waste, or radionuclide in an amount equal to or greater than two times the reportable quantities specified in 40 CFR Part 302 which have a single boundary preventing release to the environment
 - The potential for events requiring repair or restoration (cleaning, decontaminating, renovating, replacing, or rehabilitating structures, equipment, or property) in excess of \$1 million

1.3 Cognizant Manager/Person Conducting Review, select the type of pre-job review from the following list, using a graded approach based on the job's risk, complexity, and frequency of performance by assigned employees, and the guidance provided in Attachment 1.

- Task Preview
- Pre-Job Briefing

- Tailored Pre-Job Briefing
- Electrical Pre-Job Briefing
- Dry Run, Walk Down, and/or Mockup

1.4 Conduct the pre-job review in accordance with the applicable subsection in Section 2.0.

2.0 PRE-JOB REVIEW PERFORMANCE

2.1 Task Preview

NOTE

Card-sized operator aids and the WTS ISM Pre-Job Template were developed to support this preview (Attachments 5 and 6). Task previews are usually performed by the assigned personnel. Holding a face-to-face meeting with the assigned personnel depends on the supervisor's judgment and knowledge of the personnel's' experience and proficiency with the job.

2.1.1 Discuss the task preview before starting the job.

2.1.2 Ensure roles and responsibilities are clear.

2.1.3 Identify any unique conditions in effect today (error precursors).

2.1.4 Review the personal safety hazards and personal protective equipment (PPE) requirements.

2.1.5 Highlight any prior experience.

2.1.6 Identify how human performance improvement (HPI) tools will be used on this job.

2.1.7 For maintenance activities, documentation of "Task Preview" will be signified by the signature of the individual providing the task preview and the craft receiving the preview entered in the "Overview of Work Performed" section of the CHAMPS coversheet in addition to notation of "Task Preview Performed."

2.2 Pre-Job Briefing

NOTE

Attachment 4 contains guidance on practices to consider avoiding during the pre-job briefing.

2.2.1 Document the pre-job briefing on Attachment 2, using the instructions on Attachment 3, Pre-Job Briefing Form Instructions.

- 2.2.2 Cover the work scope, Technical Safety Requirements (TSRs), hazards and controls, required permits or plans, required PPE or monitoring, and a review of applicable HPI tools.
 - 2.2.3 Discuss goals.
 - 2.2.4 Discuss what should be avoided, from past experience or lessons learned.
 - 2.2.5 Engage the workers through questions or appropriate comments.
 - 2.2.6 Use the S-A-F-E-R Dialogue (on Attachment 2) to identify critical steps, error precursors, contingencies, controls, and operating experience.
 - 2.2.7 Obtain printed name, badge number, and initials of all attendees, on Attachment 2.
 - 2.2.8 Sign and enter date and time on Attachment 2.
- 2.3 Tailored Pre-Job Briefing
- 2.3.1 Develop a series of partial briefings from the standard Pre-Job Briefing Checklist (Attachment 2).
 - 2.3.2 Use the partial briefings or a different selection of the series of briefings, as necessary, prior to each performance of frequent activities.
 - 2.3.3 Conduct the briefing, following the Pre-Job Briefing Form as described in Step 2.2, and using the tailored briefings developed above.
- 2.4 Electrical Pre-Job Briefing
- 2.4.1 Include the appropriate components of the other briefing requirements in this procedure.
 - 2.4.2 Electrical pre-job briefing must also include the following:
 - Electrical hazards included with the work task
 - Other hazards associated with the work task
 - Procedures that must be followed
 - Work rules (two person rule, safety watch, as applicable)

- Special tools or test equipment to be used
- Any special precautions that are required by the working conditions
- Where and how to remove the source(s) or electrical energy
- Verification requirements
- Locations of the nearest Automatic External Defibrillator (AED)
- Required PPE and protective clothing
- Discussion of any other work that will be going on in the immediate physical area
- Other work associated with the same electrical circuits or equipment
- Discussion of boundaries and any other controls in place for the work tasks
- Review of the JHA

2.5 Dry Run, Walkdown, and/or Mockup

- 2.5.1 Evaluate the complete worker preparation needed prior to performance of the job.
- 2.5.2 Identify critical steps, where potential for harm is high.
- 2.5.3 Use one or more practice techniques (e.g., dry run, table-top, walkdown, mockup) to provide a level of proficiency with high risk activities.
- 2.5.4 Perform a pre-job briefing in accordance with Step 2.2 immediately prior to actual task performance.

3.0 POST-JOB REVIEWS

3.1 Cognizant Manager, determine need for a post-job review.

A post-job review is performed in the following situations:

- When completing any work in which complications occurred
- After completing a non-routine or important work activity

- After each high-risk phase of a risk-important project
 - At the conclusion of emergent work
 - After routine work and improvements have been identified
 - After an electrical work package that required an Energized Electrical Work Permit
- 3.2 Perform a post-job review when directed by the appropriate manager.
- 3.3 Format the post-job review based on the complexity (see Step 1.2.2) and importance of the job.
- 3.3.1 If the job was less complex or low impact, perform the following:
- [A] Conduct the post-job review as a simple debriefing among workers and their supervisors.
 - [B] Use the Task Preview format to structure the discussion.
- 3.3.2 If the job was complex or impactful, perform the following:
- [A] Conduct the post-job review as a formal review, including representatives from other disciplines that contributed to the job, e.g., work planners, safety professionals, engineers.
 - [B] Use the Pre-Job Briefing Form (Attachment 2) to organize this type of review.
- 3.4 Ensure that the principal participants in the job are included in the post-job review.
- 3.5 Encourage personnel to feel free to discuss topics that improved the safety, efficiency, and quality of the job, and those that added more challenges to success.
- 3.6 Capture constructive lessons from job performance that can be used on the same or similar jobs in the future.
- 3.7 Address the following topics, as applicable:
- Surprises or unexpected outcomes
 - Usability and quality of work documents
 - Knowledge and skill shortcomings
 - Minor errors during the activity
 - Unanticipated job-site conditions and workarounds

- Effectiveness of supervisory support
 - Adequacy of tools and resources
 - Quality of work planning and scheduling
 - Significant lessons learned to record for future reference
 - Other obstacles or disturbing "gut feelings" about the work
 - Potential enhancements
 - Opportunities for improvement
- 3.8 Document the post-job review on Attachment 7, Post-Job Review Form.
- 3.9 If the post-job review identifies any of the following, submit WIPP Form(s), EA04IM1000-1-0, in accordance with WP 04-IM1000, Issues Management Processing of WIPP Forms for non-equipment related issued. For equipment deficiencies, submit Action Request (AR) in accordance with WP 10-WC3011, Maintenance Process.
- Conditions adverse to quality
 - Issues requiring corrective actions or evaluation, as determined by the Cognizant Manager
- 3.10 Distribute a copy of Attachment 6 to the following, if applicable:
- Cognizant Manager
 - Lessons Learned Coordinator
 - Affected organizations/individuals
- 3.11 Incorporate applicable information into future pre-job reviews.
- 3.12 Provide feedback on resolution of issues to involved and affected personnel.

Attachment 1 – Pre-job Review Selection

PRE-JOB REVIEW SELECTION		
	LOW RISK	HIGH RISK
Simple and/or Repetitive Activities	Task Preview	Tailored Pre-job Briefing
Complex or Infrequent Activity	Standard Pre-job Briefing	Dry Run, Walkdown, and/or Mockup

- Task Preview
Performed prior to simple or repetitive, low risk activities
- Tailored Pre-job Briefing
Performed prior to repetitive, complex, and/or high risk activities
- Pre-job Briefing
Performed prior to infrequent, complex, and/or low risk activities
- Dry Run, Walkdown, and/or Mockup
Performed prior to infrequent, complex, and/or high risk activities

Attachment 2 – Pre-job Briefing Form

Date/Time

Job Title/Description:		Procedure/WP #:
Conducted by:		Group Attending:
Technical Safety Requirements (TSRs) – (List applicable TSRs or check none) <input type="checkbox"/> None		
Work Scope (discuss the following for today's scope of work):		
<input type="checkbox"/> Initial Conditions	<input type="checkbox"/> Sequence of Work	<input type="checkbox"/> Back-out Limits & Process
<input type="checkbox"/> Precautions & Limits	<input type="checkbox"/> Tools/Equipment Required	<input type="checkbox"/> Work Site Conditions/ Changes (for ongoing work)
<input type="checkbox"/> Roles and Responsibilities	<input type="checkbox"/> Support/Handoffs	
Hazards (check all applicable or none) and Controls:		<input type="checkbox"/> None
<input type="checkbox"/> Confined Space	<input type="checkbox"/> High Noise	<input type="checkbox"/> Radiological
<input type="checkbox"/> Energized Equipment	<input type="checkbox"/> High Pressure/Temperature	<input type="checkbox"/> Rigging & Lifting
<input type="checkbox"/> Falling Objects	<input type="checkbox"/> Hot Work	<input type="checkbox"/> Rotating Equipment
<input type="checkbox"/> Flammable Materials	<input type="checkbox"/> Limited Lighting	<input type="checkbox"/> Trip/Fall Hazards
<input type="checkbox"/> Hazardous Materials	<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Stored Energy
<input type="checkbox"/> Heavy Equipment Operation	<input type="checkbox"/> Pinch Points Exposed	<input type="checkbox"/> Weather (hot/cold/wet)
<input type="checkbox"/> Hidden Utilities	<input type="checkbox"/> Pressurized Gas Cylinders	<input type="checkbox"/> Working at Heights
<input type="checkbox"/> Other		
Permits/Plans Required (check any applicable or none):		<input type="checkbox"/> None
<input type="checkbox"/> Asbestos	<input type="checkbox"/> Excavation	<input type="checkbox"/> IH Sample
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Fall Protection	<input type="checkbox"/> Lockout/Tagout
<input type="checkbox"/> Energized Equipment	<input type="checkbox"/> Hot Work	<input type="checkbox"/> Radiological
Personal Protective Equipment and Monitoring (check those required or none): <input type="checkbox"/> None		
<input type="checkbox"/> Eye Protection	<input type="checkbox"/> Hearing Protection	<input type="checkbox"/> Respiratory Protection
<input type="checkbox"/> Foot Protection	<input type="checkbox"/> IH Monitoring	<input type="checkbox"/> Special Clothing
<input type="checkbox"/> Hand Protection	<input type="checkbox"/> Radiation Monitoring (TLD, air samples, etc.)	<input type="checkbox"/> Underground Equipment
<input type="checkbox"/> Hard Hat		
S-A-F-E-R Dialog:		Review HPI Tools:
<input type="checkbox"/> Summarize the Critical Steps		<input type="checkbox"/> Questioning Attitude
<input type="checkbox"/> Anticipate Error Traps		<input type="checkbox"/> Self-Checking (STAR)
<input type="checkbox"/> Foresee Consequences		<input type="checkbox"/> Peer-Checking
<input type="checkbox"/> Evaluate Defenses		<input type="checkbox"/> Effective Communications
<input type="checkbox"/> Review Experience		<input type="checkbox"/> Timeout
Comments:		

Attachment 2 – Pre-job Briefing Form (continued)

Date/Time:	
Job Title/Description:	Procedure/WP #:
Conducted by:	Group Attending:

Pre-job Briefing Attendees

	Printed Names	Badge No.	Initials ¹
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

NOTE 1: Worker's initials indicate attendance at the pre-job briefing and satisfactory understanding of all items discussed.

By my signature, I indicate that I have conducted the pre-job briefing covering all items indicated above concerning the requirements specified for the work to be performed.	
Person Conducting Briefing:	Date/Time:

Attachment 3 – Pre-job Briefing Form Instructions

1. **Job Title/Description:** A description of the activity to be performed. If using a Work Package or Procedure the title should be written here.
2. **Procedure/Work Package #:** The procedure or work package number. If there is none for the activity, then write "none."
3. **Conducted by:** The name of the person that conducted the briefing.
4. **Group Attending:** The work group or groups participating in the pre-job briefing.
5. **Technical Safety Requirements (TSRs):** If there are any TSRs that are applicable or related to the work that is being performed they must be discussed in detail. Particular attention must be paid to the requirements and limitations of the TSR, and the roles and responsibilities of personnel as they relate to the TSR to ensure that the TSR requirements are not exceeded.
6. **Work Scope:** All items must be discussed for a full pre-job briefing. If doing a tailored pre-job briefing then selected items can be discussed.
 - A. **Initial Conditions:** Discuss the initial conditions that are, or must be established before doing the work. This includes any prerequisites that must be established, permission that must be obtained, facility conditions that must be established, etc.
 - B. **Precautions & Limits:** Discuss any SPECIFIC precautions and limitations that are applicable to the work. NOTE: if there are any applicable TSRs related to the work they must be discussed here.
 - C. **Roles and Responsibilities:** Discuss the specific roles and responsibilities of each individual involved in the job or task. Make sure that everyone involved in the activity understands the roles and responsibilities of everyone else assigned to the activity.
 - D. **Sequence of Work:** Describe the major or significant steps that will be completed to accomplish the work. If a work package or procedure is used to accomplish the activity it should be used as the basis for the discussion. Consideration should be given to providing a copy of the work package instructions or procedure to the participants.
 - E. **Tools/Equipment Required:** Describe and discuss the tools and equipment required to complete the task or activity. Include a discussion of any SPECIFIC precautions, limitations, hazards, etc. associated with using the tool(s) and/or equipment during this task or activity.
 - F. **Support/Handoffs:** List and discuss any other groups that must be coordinated with to accomplish the work. Describe how this interface will occur and clearly describe the roles and responsibilities of each support

Attachment 3 – Pre-job Briefing Form Instructions

group. Discuss how and when this task, product, or activity is to be "handed off" to another group, if applicable.

- G. **Back-out Limits & Process:** Discuss when/how stop work or timeout would apply. Pay particular attention to SPECIFIC requirements or limits that require the work to be stopped and what must be done if that occurs.
 - H. **Work Site Conditions/Changes (for ongoing work):** Discuss the conditions at the worksite including environmental conditions (i.e., temperature, noise, etc), other work going on in the area, potential obstacles or hazards, slippery conditions, etc. For ongoing work, describe any changes in conditions from the previous day.
7. **Hazards and Controls:** This checklist is meant to provide guidance for conducting pre-job briefings and is not meant to replace other procedures or documents that define the requirements associate with specific hazards and controls.
- A. **Confined Space:** Discuss the precautions and limitations associate with working in a confined space. This is always required if a confined space permit is required to do the work. However there may be other times when the specific requirements associate with "confined space" do not apply and a permit is not necessary, but the job is in an area that limits or restricts movement.
 - B. **Energized Equipment:** Discuss the precautions, limitations and controls associate with working with energized equipment or components that are specific to accomplishing this task. This includes working with power tools, equipment and extension cords. It also includes working near or adjacent to electrical conduit, wiring, busses, etc. This must also include the steps listed above in the procedure (including the boundary), and the specific steps for achieving and verifying an electrically safe work condition per WP 12-IS.03, chapter on Safe Conduct of Electrical Work – Perform Work Within Controls.
 - C. **Falling Objects:** Discuss the hazards and controls associate with falling objects. This typically is applicable if the activity is to be performed in an area where overhead work is being performed.
 - D. **Flammable Materials:** Discuss the SPECIFIC precautions, hazards and controls associated with the use of any flammable materials that will be used to perform this task or activity.
 - E. **Hazardous Materials:** Discuss any SPECIFIC requirements associated with the storage, handling and disposal of hazardous materials that are used during this activity.

Attachment 3 – Pre-job Briefing Form Instructions

- F. Heavy Equipment Operation: Discuss the SPECIFIC precautions and controls associated with the operation of heavy equipment used to perform this activity. Particular attention should be paid to the use of spotters, pathways, obstacles, and surface conditions.
- G. Hidden Utilities: Discuss the precautions and controls associate with hidden utilities that are specific to this task. This typically applies when doing work that requires digging in the ground or drilling or cutting in a wall, floor, or ceiling.
- H. High Noise: Discuss the hearing protection required if working in a high noise area as part of this activity. Also discuss how communications will effectively occur in this high noise area.
- I. High Pressure/Temperature: This could involve working near or with a high pressure and/or high temperature system, or performing maintenance activities on such a system that requires a boundary breach. Discuss the precautions and controls specifically associate with this work
- J. Hot Work: Discuss the precautions and controls associated with any hot work that must be accomplished to perform this task, or if this task is to be performed in an area where hot work is being conducted by others.
- K. Limited Lighting: Discuss the precautions and controls associated with working in areas that lack sufficient operational lighting.
- L. Overhead Utilities: Discuss the precautions, hazards, and controls associate with working in the area of overhead utilities. Particular attention should be paid to moving equipment that could potentially come into contact with the overhead utilities, or working on platforms or roofs near overhead utility connections.
- M. Pinch Points Exposed: Discuss any potential pinch points that will be created while performing this work and the precautions and controls that will be used to prevent a pinching event.
- N. Pressurized Gas Cylinders: Discuss the precautions and controls associated with moving, handling, or storing pressurized gas cylinders.
- O. Radiological: Discuss the specific precautions and steps to be taken to reduce exposure to radiation during this work. This discussion is in addition to discussion of the requirements associate with a radiation work permit (RWP) that may be general in nature.
- P. Rigging & Lifting: Discuss the SPECIFIC precautions, hazards, and controls associate with any rigging or lifting that must be performed to accomplish this activity. Equipment inspections, the sequence of events,

Attachment 3 – Pre-job Briefing Form Instructions

and stop criteria should also be covered. If a rigging plan is associated with this work, then the requirements of that plan must be covered.

- Q. Rotating Equipment: Discuss the specific steps or activities that will be performed on or around rotating equipment and the controls that will be utilized.
 - R. Trip/Fall Hazards: Discuss the precautions and controls associated with minimizing the hazard of working in areas with uneven surfaces, obstacles, and holes that may cause trips or falls.
 - S. Stored Energy: Discuss the precautions, hazards, and controls associated with working on a system or component that may contain stored energy. Stored energy includes electrical, pressure, temperature, springs, etc. Include a discussion of the checks that will be performed to verify the absence of stored energy prior to working on the system or component.
 - T. Weather/Environment (hot/cold/wet): Discuss the potential effects and corresponding controls associated with performing this work in an extreme environment. Pay particular attention to those specific steps or activities that will be impacted by the weather/environment and any work/rest limits. The symptoms and effects of heat stroke/exhaustion or hyperthermia should be discussed, as applicable.
 - U. Working at Heights: Discuss the precautions and controls that are specifically associated with working at heights for this activity. Fall protection requirements must be discussed. In addition the impact or effect of performing the work at heights using fall protection equipment should be covered.
8. **Permits/Plans Required:** If any of the listed permits or plans are required, they will be developed and approved in accordance with applicable procedures and must be discussed in detail as part of the pre-job briefing. Specific roles and responsibilities of individuals should also be discussed (e.g. who is responsible for IH sampling) as well as precautions and limitations associated with the plan or permit as it relates to the job.
9. **Personnel Protective Equipment (PPE) and Monitoring:** If any of the listed PPE or monitoring is required, it should be discussed as it specifically relates to the job. Particular emphasis should be placed on PPE that is unique to the job. For example if foot protection is always required to be worn then it should be mentioned, but not emphasized. If PPE or monitoring is only periodically required during the job, then emphasis should be placed on when it is required, why it is required, and how workers will ensure they are using it at the appropriate time.

Attachment 3 – Pre-job Briefing Form Instructions

10. **S-A-F-E-R Dialogue:**

Summarize the critical steps. They are the steps or series of steps, or action that, if performed improperly, will cause harm to equipment, people, or the environment; result in the violation of a requirement; or significantly impact the operation of the facility or organization. If there are no critical steps then state that in the Comments Section.

Anticipate errors for each critical step and relevant error precursors. Briefly review the short list of error precursors and determine if any of them are applicable to the job. Emphasis should be placed on error precursors that apply to critical steps.

Foresee probable and worst-case consequences should an error occur during each critical step.

Evaluate controls and contingencies at each critical step to prevent, catch, and recover from errors, and to reduce their consequences.

Review previous experience and lessons learned relevant to the specific task and critical steps. If there is no previous experience then state that.

11. **Review HPI Tools:** Go over the five basic WIPP HPI tools paying particular attention to the use of any of the tools at specific times during the course of the job. For example discuss peer checking in general but also identify any particular steps or activities where peer checking should be used.
12. **Comments:** Note any comments related to any of the areas that were covered during the pre-job briefing or any issues or concerns that were discovered. Comments are optional and not required – if there are none then leave this section blank.
13. **Pre-Job Briefing Attendees:** Ensure personnel in attendance enter their names and badge numbers, and initial to indicate their satisfactory understanding of the information discussed.
14. **Person Conducting Briefing:** The briefing leader shall sign and date the form and submit it to his supervisor for review.

Attachment 4 – Pre-job Briefing Practices to Consider Avoiding

1. Conducting the meeting as a monologue, without active participation by the assigned workers.
2. Personnel failing to express their concerns or ask questions
3. Holding separate briefings for principal workers
4. Using a "cookbook" approach to the briefing covering every item on the pre-job briefing checklist regardless its applicability
5. Being insensitive to how mind-sets or expectations may disguise problems and warning signals
6. Not assigning individual-specific responsibilities for contingencies and abort decisions
7. Supervisor or designee leading the pre-job briefing instead of the lead worker
8. Conducting the meeting in a noisy, distracting environment
9. Holding briefings longer than 30 minutes, which could promote inattention and lack of interest
10. Not considering equipment work history or the worker's personal experience as relevant sources of operating experience
11. Not considering the worker's proficiency with the task to determine if the task is performed infrequently
12. Discussing human performance tools in generalities
13. Covering operating experience irrelevant to the task

Attachment 5 – Pre-job Review – Job Aids

WIPP Task Preview	
Task Preview Steps	WIPP HPI Tools
Review the Job/Task	
Discuss Work Site Conditions	Questioning Attitude
Identify Hazards & Controls	Self Check (STAR)
Error Precursors/ Controls	Peer Check
Discuss Prior Experience	Effective Communications
Review HPI Tools	Timeout
It's Always Different: <i>This person, doing this job, on this day, in this environment!</i>	

Task Demands	Individual Capabilities
Time Pressure (in a hurry)	Unfamiliarity w/Task or 1 st Time
High Workload	Lack of Knowledge (Mental Model)
Simultaneous, Multiple Tasks	New Technique (not used before)
Repetitive Actions, Monotonous	Imprecise Communication Habits
Irrecoverable Acts	Lack of Proficiency or Inexperience
Interpretation Requirements	Indistinct Problem Solving Skills
Unclear Goals, Roles & Responsibilities	"Hazardous" Attitude for critical task
Lack of or Unclear Standards	Illness or Fatigue
Work Environment	Human Nature
Distractions and Interruptions	Stress (limits attention)
Changes or Departure from Routine	Habit Patterns
Confusing Displays or Controls	Assumptions (inaccurate mental picture)
OOS Equipment and Workarounds	Complacency or Overconfidence
Hidden System Response	Mindset ("tuned" to see)
Unexpected Equipment Conditions	Inaccurate Risk Perception (Pollyanna)
Lack of Alternative Indication	Mental Shortcuts (biases)
Personality Conflicts	Limited Short-Term Memory

S-A-F-E-R Dialog
<p>Summarize Critical* Steps</p> <p>Anticipate Errors</p> <p>Foresee Consequences</p> <p>Evaluate Controls</p> <p>Review Experience</p>
<p>*Critical Step: <i>A step, series of steps, or action that, if performed improperly, will cause harm to equipment, people, or the environment; result in the violation of a requirement; or significantly impact the operation of the facility or organization</i></p>

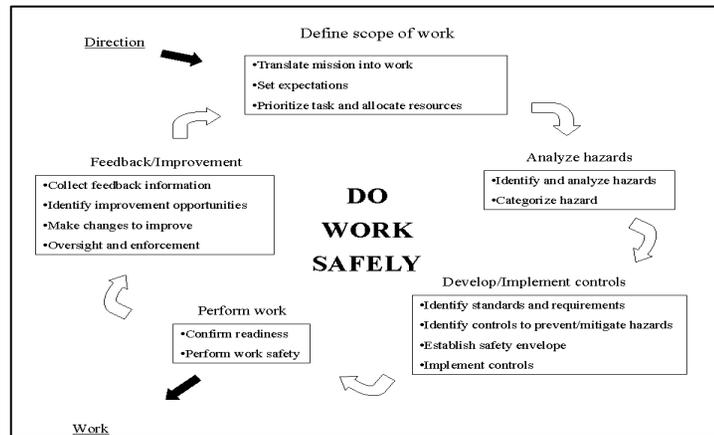
Attachment 6 – WTS ISM Pre-Job Brief Template

WTS ISM Pre-Job Brief Template

Define the Scope of Work
What is the exact scope?
What would be stepping outside of scope?
If outside scope, what to do? What are the critical steps?
Are roles and responsibilities clear—who is doing what?

Analyze the Hazards
Discuss the JHA.
Any hazards not addressed in the JHA?
Environmental conditions for today?
Collateral hazards – nearby equip.?
HPI Twin Analysis

Feedback and
Continuous Improvement
What was good, bad & unexpected?
What changes for similar job next time?
Maintenance History
Safety Feedback



Implement Hazard Controls
Eliminate, Mitigate, Control
Permits, Procedures, L/T, PPE, Pre-job

HPI Tools
Self-Check (STAR)
Peer Check
Questioning Attitude
Time-Out
Three Part Communication

Perform Work Within Controls
ISM-Individual Attitude & Responsibility for Safe, Compliant work
Con ops and HPI

Pre-job brief conducted
by: _____ / _____

Date

Name

CONOPS Principles
Procedure Compliance
Thinking Compliance
Three Part Communication
Log keeping
Independent Verification

Attachment 7 – Post-Job Review Form

Job Title/Description:	Procedure/WP #
Conducted by:	Group Attending:
<input type="checkbox"/> Detail <input type="checkbox"/> Lessons Learned (continued):	

Attachment 7 – Post-Job Review Form

Job Title/Description:		Procedure/WP #	
Conducted by:		Group Attending:	
Post-Job Review Attendees			
	Printed Name	Badge No.	Initials
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
Person Conducting Review (signature)		Date/Time	