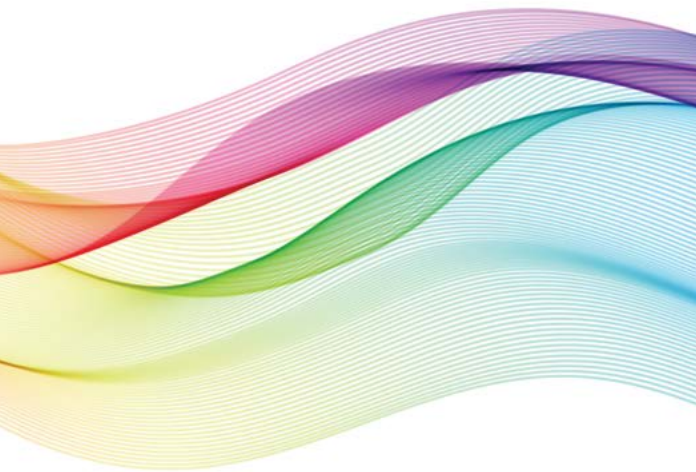




STANDARDS

H A N D B O O K

2024-2025 Edition



Safety. It's personal.



ENERGY NORTHWEST

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FOREWORD

You can prevent an accident by complying with these rule-based safety requirements and expectations, using proper behaviors and human performance error-prevention tools.

This handbook is not intended to replace the ISPM or any other EN policy, procedure or instruction. Always refer to the current policy, procedure or instruction for the most up-to-date requirement.

Contact your supervisor to obtain verified copies of policies, procedures or instructions as needed.

Is it a Standard or an Expectation?

Standard – A requirement that must be done 100% of the time. Standards are written requirements contained in policies, procedures, instructions and training manuals.

The chapters of the ISPM and use of error-prevention tools are **Standards**.

Expectation – An expectation can be verbal or in writing. These are behaviors and actions that the management team communicates to the workforce and are to be followed.

Excellence in Performance – exceeding standards and expectations – is our goal. We apply the Excellence Model to our daily work as a basis to sustain exemplary performance.

EN Safety Expectations

All employees, contractors and visitors are expected to adhere to basic safety guidelines at all of EN's properties. The behaviors listed below capture best practices for safety across our agency.

- All meetings should begin with a safety message that includes review of hazards present and what to do in case of an emergency.
- Do not talk over public address announcements.
- Keep your eyes on path: Do not use your cellphone or review materials while walking.
- Always use the handrails when traversing stairways.
- In inclement weather, wear appropriate footwear or use shoe grippers; keep your hands out of your pockets to maintain balance.
- Use established walkways where available when traversing outdoors.
- Maintain three-points of contact when using ladders.
- Maintain work site cleanliness: Clean as you go and return all materials to their proper location at the end of the day.
- At Columbia Generating Station, ensure all doors in the power block close and latch behind you.
- If you see something, say something: Coach peers to the correct behavior.





Excellence Model

The Right People

The Right Picture

Energy Northwest Excellence

Safe, Reliable, Predictable

Organizational Excellence

Effective Leaders
Predictable
Accountable
Learning Organization
Teamwork

Operational Excellence

Safety
Configuration Control
Teamwork

Training/Business Excellence

Effective
Accountable
Model
Customer Satisfaction
Teamwork

Equipment Excellence

Zero Tolerance
Reliable
Predictable
Pride
Teamwork

Individual Excellence

A

Accident Free

C

Control Dose/Cost

E

Event Free

M

Meet Commitments

A

Attend Training

N

No Rework

Enablers of Excellence

Qualified Workers

Job/Business Planning and Preparation

Procedures/ Work Instructions

Verification/ Validation

Supervisor Oversight

Worker Practices

The Right Process

The Right Coaching

Accident Free (Expected Individual Results)

- Actively engage in discussion of safety aspects of the job (in pre-job briefings and at other times).
- Use proper personal protective equipment (PPE) and question whether additional actions must be taken to ensure safety.
- Conduct formal and/or informal job safety analyses prior to beginning work.
- Exhibit concern for others' safety, looking out for one another.
- Request the conduct of a job safety evaluation prior to beginning work.
- Adhere to clearance and tagging practices.

HUMAN PERFORMANCE

Worker Error-Prevention Tools

Fundamental Human Performance (HU) Tools

- Task preview*
- Take 2*
- Questioning attitude (FACTS)
- Stop when unsure
- STAR and touch/read/read (self-checking)*
- Procedure and work instruction use and adherence*
- Three-way communication
- Phonetic alphabet

Conditional HU Tools

- Pre-job brief
- Flagging
- Simultaneous verification
- Independent verification
- Peer-checking/peer review
- Placekeeping
- Turnover
- Post-job review
- Give 2

Technical HU Tools

- Validate assumptions
- Signature
- "Do not disturb" sign
- Peer review
- Turnover
- Conservative decision making

* Core 4 Human Performance Tool.

A description of the human performance error-prevention tools and how to use them can be found in STANDARD-01, STANDARD-03 and SWP-PRO-01.

Task Preview

A task preview is performed regardless of whether a pre-job brief is performed. Before attending a pre-job brief or starting work, review procedures or other related documents to become familiar with the scope of work, task sequences and critical steps.

Use the **SAFER** questions below upon receiving/retrieving documentation for the work (work package, procedure, etc.):

SUMMARIZE the critical steps

- What are the critical steps?
- What error-prevention tools should be used at critical steps?

ANTICIPATE error-likely situations

- What mistakes might be made?
- What are the relevant error precursors?

FORESEE consequences

- What does proper task performance require? Roles? Responsibilities?
- What is the worst thing that could happen to me, my co-workers, the plant or equipment?

EVALUATE defenses/barriers

- What kind of defenses and contingencies should the team consider and use?
- Do job site conditions support safe and accurate task performance?
- Are defenses associated with the task (e.g., permits, procedures, etc.) adequate and understood?
- Are required safety behaviors (industrial, radiological, environmental) known?

REVIEW operating experience (internal or external)

- Have we done the task before? Is there industry operating experience (OE) that applies?
- What mistakes have been made in the past?



How to Take 2

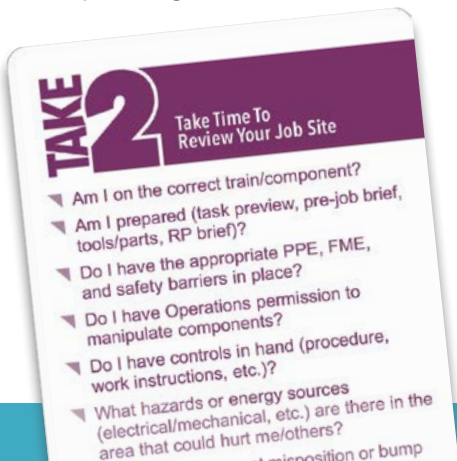
Review the Take 2 lanyard card or job aid.

Explore the job site for a few minutes by walking and looking around the work area (near the hands-on touch points) and adjacent surroundings to identify conditions such as the following:

- Industrial safety, radiological and environmental hazards.
- Trip-sensitive equipment to avoid jarring or disturbing.
- Right division, right component.
- Critical parameters or indicators important for task success.
- Error precursors (at critical steps).
- Conditions consistent with the work package, procedure and pre-job briefing.

Talk with co-workers or the supervisor about unexpected hazards or conditions and the precautions to take.

Eliminate hazards, install appropriate defenses or develop contingencies before proceeding with the task.





Re + Md → ØE

Reducing error and managing defenses leads to zero events.

Procedure and Work Instruction Use and Adherence (SWP-PRO-01)

General Procedures

- Blanket guidance allowing procedures and work instructions to be performed in any sequence should be the exception and not the normal practice.
- Procedures and work instructions should be revised to eliminate the need for blanket guidance.
- Procedures and work instructions should provide specific direction for steps that can be performed out of sequence.
- Before taking action, individuals should understand the significance of the action and its intended results.

Continuous Use Procedures

- Review and understand the document including the precautions, limitations and prerequisites sections before performing any steps.
- Have a copy or applicable pages in immediate possession or be in direct communication with someone who has a copy in hand.
- Read and understand each step before performing it.
- Perform the step as written in the sequence specified, except when an approved process specifically allows deviation.
- Complete and placekeep each step before starting the next step to ensure the step was performed correctly.
- Review the document at completion of the task to verify appropriate steps have been performed and documented.

Reference Use Procedures

- Review and understand the document including the precautions, limitations and prerequisites sections before performing any steps.
- Have a copy or applicable pages/sections open at the work site.
- Placekeep steps as often as practical (after each procedure section is completed, prior to a break, etc.).
- If any portion of the document is performed from memory, it must be performed in the sequence specified.
- Perform each step as written, except when an approved process specifically allows deviation.
- Refer to the procedure or instruction at least once or as often as required to complete the task in accordance with requirements.
- Review the document at the completion of the task to verify all appropriate steps have been performed and documented.

Information Use Procedures

- Review the document as needed before performing a task. *The task may be completed from memory; however, the user is responsible for performing the activity in accordance with the document.*
- Perform procedures or work instructions that contain specific process order in the given order unless otherwise specified within the document.

Multiple Use Procedures

- Allowed for procedure or work instruction sections or subsections that designate different levels of use.
- Those sections or subsections are performed in accordance with the designated use type.

Give 2

A job site tool that provides direction when you are faced with uncertainty (trigger) or the plan has changed. This can be applied to industrial safety, human performance or work quality issues requiring a decision to determine a path forward. Review the Give 2 lanyard or job aid for more direction.

What is a trigger?

A trigger is something not normal, missing key details, unforeseen or not part of the contingencies. Examples include:

- Unplanned job site conditions or equipment issues.
- Procedure, instruction or performance issues.
- Vague or not understood communications.

When to Give 2?

- When faced with an unexpected condition or situation.
- When you sense a trigger.
- When there is a perceived need to deviate from the established schedule or work plan.
- When there is a sense of urgency to continue work and the conditions do not exactly match the plan.
- When you question yourself or others regarding “What process are we in?”
- When you need to stop work and contact your supervisor.

Upon return to work, verify and validate:

- Equipment labeling verified and installed.
- System or component configuration, clearance orders or alarms are resolved.
- Work orders, procedures or drawings are corrected or clarified.
- All other open-ended issues related to the concern are addressed.
- Obtain supervisor confirmation before task restart.

Questioning Attitude

A questioning attitude requires maintaining vigilant situational awareness toward surrounding work conditions to detect error-likely situations; unsafe, hazardous or otherwise unusual conditions; not proceeding in the face of uncertainty; and basing decisions on facts.

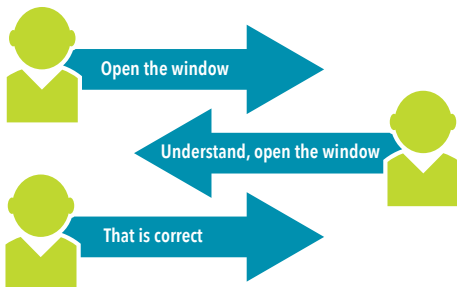


Phonetic Alphabet

Alpha	Hotel	Oscar	Victor
Bravo	India	Papa	Whiskey
Charlie	Juliet	Quebec	X-ray
Delta	Kilo	Romeo	Yankee
Echo	Lima	Sierra	Zulu
Foxtrot	Mike	Tango	
Golf	November	Uniform	

Three-Way Communication

Used for communicating operational information





**Coach your co-workers and
be engaged thinking workers.**

INDUSTRIAL SAFETY

ISPM-1, Safety Program

Responsibilities of all employees

- Responsible for following established industrial safety policies and ensuring others are adhering to those policies.
- Responsible for contacting their supervisor, and documenting deficiencies and safety hazards/violations using the Corrective Action Program.
- Report near misses and work-related injuries/illnesses to supervisor/manager and industrial safety immediately or when safe to do so.

Responsibilities of supervisors

- Ensure employees are adhering to established safety policies by observing the activities of their workers and coaching to correct or reinforce positive behaviors.
- Promote safety through individual actions and attitude.
- Follow ISPM-1 requirements for reporting/documenting injuries, illnesses, accidents and near misses.
- Reviewing communications matrix and Safety Flash requirements in GBP-COM-02, "Developing Content For Internal Communication Tools."
- Investigate all work-related injuries, illnesses, accidents and near misses for employees. Contact industrial safety for assistance.

Supervisors are responsible for ensuring appropriate pre-job briefings are conducted prior to beginning work tasks.

Other sections of ISPM-1 cover the following requirements:

- Accident/injury reporting and investigation
- Off-site medical care/industrial insurance claim filing
- Classification of work related injuries and illnesses
- Property damage accidents
- Near miss incident
- Safety meetings
- Project and department safety plans (outage)
- Contractor safety management



ISPM-2, Compressed Gases and Welding/Cutting

Requirements include:

- Compressed gas storage requirements
- Compressed gas manifolds and component parts
- Compressed gas use and transport
- Compressed gas cylinder installation
- Acetylene use requirements
- Compressed air receiver vessel inspection requirements
- Hexavalent chromium PPE requirements
- Welding safety requirements
- Cutting safety requirements
- Crystalline silica safety requirements (concrete dust, sandblasting)

Always secure cylinders near the top and bottom and keep them out of direct sunlight at all EN facilities.

If the welding process cannot be isolated, welding flash screens will be set up to shield exposure to welding flash.

Approved eye protection, welding gloves, aprons, helmets and respirators, and other protective clothing will be used as required to prevent exposure.

Supervisors are responsible for inspecting work areas and ensuring these requirements are met.

Supervisors are responsible for completing crystalline silica exposure control plans (ISPM-2, attachment 6.2) and hexavalent chromium inventory worksheets (ISPM-2, attachment 6.1).

ISPM-3, Confined Space Entry

Requirements include:

- Never enter a confined space without knowing and being able to comply with ISPM-3 requirements.
- You must have a pre-job brief and specific authorization from a designated safety representative/entry supervisor (DSR/ES) prior to entry.
- If you are involved with confined space entry, read the ISPM-3 requirements.
- Entrants for permit-required confined spaces must be SFBI qualified.
- DSR/ES to complete Form 27033, "Confined Space Entry Permit/Atmospheric Testing Log." Two DSR/ES qualified individuals must sign off on the permit prior to making an entry. There shall be only one active confined space entry permit in use per confined space.



ISPM-4, Control of Hazardous Energy Sources

Requirements include:

- This ISPM establishes requirements for the safe control of energy through locking and tagging of machinery and equipment.

At Columbia these requirements are in PPM 1.3.64, "Plant Clearance Orders."

For Facilities & Commercial Engineering areas and other EN business units not listed, see GBP-FAC-04, "Non-Power Block Clearance Orders."





Danger tag: A red tag placed on equipment when personnel safety or equipment safety is of primary concern. These tags are applied and removed by Operations personnel. **Danger tags represent a lifesaving procedure. DO NOT violate a danger tag.**



Caution tag: A yellow and black striped tag used to advise personnel that an unusual operating condition exists and provides specific operational information for that component. Repositioning a caution-tagged component requires shift management approval.



Equipment tag: A blue and black striped tag used within danger and test clearances. Repositioning equipment-tagged components requires shift management approval.



Test tag: An orange and black striped tag placed on equipment to delineate a test clearance boundary.



ISPM-5, Crane/Hoist Operations and Safety

Requirements include:

- Crane/hoist inspection and testing requirements
- Crane suspended platform requirements
- Mobile/fixed crane/hoist operations
- Lifting and rigging operation requirements
- Operators and riggers must be qualified prior to performing crane/hoist activities.
- Rope used for hand lines or tag lines must not be fabricated from natural fiber material. See this ISPM for more information concerning ropes.

The load path must be secured with one of the following methods:

- Barrier tape and/or signs warning of hazard.
- A spotter is posted to keep workers out of the load path.

Do not place any part of your body under a load.

At Columbia, additional requirements are in:

- PPM 10.4.1, "Pendant Controlled Crane Inspection, Maintenance and Testing"
- PPM 10.4.3, "Sling Inspection, Maintenance and Testing"
- PPM 10.4.4, "Mobile Crane Operation, Inspection, Testing and Maintenance"
- PPM 10.4.5, "Reactor (MT-CRA-2) & Turbine Building (MT-CRA-1) Overhead Traveling Crane Inspection, Maintenance and Testing"
- PPM 10.4.10, "Jib Cranes and Electrically Operated Hoists Inspection, Maintenance and Testing"
- PPM 10.4.11, "Design, Fabrication, Testing and Control of Below the Hook Lifting Devices"
- PPM 10.4.14, "Miscellaneous Load Handling"
- PPM SOP-CRANE-OPS, "Crane Operations"

ISPM-6, Electrical Tools, Appliances and Extension Cord Use

Requirements include:

- Electrical appliances (general)
- Personal use heaters
- Coffee makers and refrigerator requirements
- Prohibited electrical items
- Use of extension cords
- Office electrical safety

Directors/Managers are responsible for inspecting work areas at least quarterly and monitoring compliance with the electrical appliance requirements of ISPM-6.

Portable electric heaters for personal use must meet the following requirements:

- Heaters must NOT exceed 1500 watts. Heaters must have safety tip-over switches (the heater turns off if it falls over).
- Heaters must be thermostatically controlled.
- Heaters must be turned off at the end of the work shift.
- Combustible materials (paper, trash, etc.) must be kept at least 36 inches away from the heater per the manufacturer's requirements.
- Plug heater directly into a wall or floor power receptacle.

Personal appliances (e.g., microwave ovens, popcorn poppers, mini-refrigerators and toasters) are **NOT** to be located in personal workspaces.

The following items are prohibited: hot plates, immersion cup heaters, toaster ovens, electrical plug-in type devices used for air freshening purposes and plug-in electrical timers. For a complete list see ISPM-6.



ISPM-8, Excavation, Trenching and Shoring

Requirements include:

- Each site or facility is required to have an excavation permit procedure approved by industrial safety. The site or facility procedure shall include the requirements of this ISPM.

At Columbia, these requirements are in PPM 10.2.32, "Soil Excavation, Backfill and Compaction."

For Facilities & Commercial Engineering areas, the requirement is FCEI-3.2.1, "Excavation, Trenching and Shoring."

A competent person shall perform daily inspections of excavations, adjacent areas, and protective systems to evaluate the potential for cave-ins, failure of protective systems or other hazardous conditions.

In excavations or trenches more than 4 feet deep that employees are required to enter, excavated material and other material shall be stored and retained at least 2 feet away from the edge of the excavation or trench.

Barriers, shoring, sloping systems or other effective methods to prevent excavated or other material from falling or rolling into the excavation or trench will be used.

When workers are required to be in excavations or trenches 4 feet deep or more, an adequate means of exit, such as a ladder or steps, shall be provided.

Trenches and excavations may meet the criteria for a confined space and should be evaluated by the supervisor.

ISPM-9, Fall Protection

Requirements include:

- This ISPM provides the requirements for fall protection systems including fall restraint, work positioning, fall protection, safety monitor and lifeline systems.
- Ladder and scaffold requirements are in this ISPM.
- Use of personal flotation devices and life rings are within this ISPM.
- You must be SFAB qualified to use fall protection equipment.
- Rope used for hand lines or tag lines must not be fabricated from natural fiber material. See this ISPM for more information concerning ropes.

Fall protection equipment and ladders shall be inspected by the user prior to use.

Review ISPM-9 prior to standing or stepping on plant equipment.

If a fall hazard of 4 feet or greater cannot be abated through design, then an approved fall protection system and fall protection plan Form 25768, "Fall Protection Plan," are required.

If a drowning hazard is present and a fall protection system cannot be used, the use of personal flotation devices and life rings are required.

Fall protection equipment shall be inspected annually and have identification to show the device has been inspected.

ISPM-9, Fall Protection (continued)

Scaffolding tags and signs:

- **Red** scaffold tag - Scaffold use is restricted to scaffolding crew or personnel designated by scaffolding craft supervisor/foreman or designee.
- **Yellow** scaffold safety tag – Scaffold has some restriction/cautions on use but can be used by all personnel as noted on tag.
- **Green** scaffold safety tag - Scaffold meets all appropriate standards and is ready for use by all personnel.
- HP survey sign - Only health physics technicians (and scaffold installers) may use scaffolding until survey is complete in dose affected areas without approval by HP technicians and competent scaffold installer. HP removes this sign when survey is complete.
- Scaffold tag – This tag is used to document the following during the installation, usage and removal process. (See the Current → Apps → Scaffold Tag.)
- See PPM 10.2.53 for additional requirements.



ISPM-10, Fire Protection and Life Safety

Requirements include:

- Means of egress
- Fire resistive assemblies
- Flammable and combustible materials
- Fire protection systems
- Permits
- Cooking
- Housekeeping
- Lithium battery requirements
- Wildland fire prevention/urban interface
- Requirements for weld curtains

At Columbia additional requirements are in:

- PPM 1.3.10, "Plant Fire Protection Program Implementation"
- PPM 1.3.10A, "Control of Ignition Sources"
- PPM 1.3.10B, "Active Fire System Operability and Impairment Control"
- PPM 1.3.10C, "Control of Combustibles"
- PPM 1.3.57, "Barrier Impairment"

Public egress doors shall not be obstructed or blocked without approval by EN fire protection.

Access into an office cubical should be a minimum of 24 inches wide to allow emergency first responder access.

Fire doors shall not be propped or blocked open, unless posted with an approved barrier impairment.

In the plant, challenge fire doors to ensure they are fully closed and latched.

Portable fire extinguishers shall not be obstructed or obscured from view. A minimum clear distance of 36 inches in front and to the sides of the portable fire extinguisher will be maintained.

Automatic fire sprinklers shall not be obstructed. A minimum clear area of 18 inches below the sprinkler deflector shall be maintained. Ceiling tiles and access panels shall be in place at all times in areas where fire sprinklers are located below ceiling tiles.

Open frying is prohibited on cook tops/ranges. Food should be attended at all times during cooking, warming and toasting. Baking in an electric oven or slow cooker (Crockpot) does not require constant attention.

Fire Impairment Additional Reminders:

PPMs 1.3.10C, 1.3.10A, 1.3.10B, 1.3.57

- Transient combustible (TCP) and ignition source permits (ISP) have due dates and must be extended and/or closed by the due date.
- Permits are to be lifted upon completion of the work.
- Permits are to be closed in the tracking system when work is complete.
- Permits are to be hanging at the job site when work is being performed.
- Permits are to be at open status in the tracking software when the work has started.

Any questions refer to the applicable procedural guidance:

- TCP (PPM 1.3.10C)
- ISP (PPM 1.3.10A)
- Plant Fire Protection System Impairment Permit (FPSI) (PPM 1.3.10B)
- Plant Barrier Impairment Permit (BI) (PPM 1.3.57)

ISPM-11, Hazard Communication Program

Requirements include:

- Container labeling
- Safety Data Sheets (SDS)
- Training

Additional requirements are in:

- GBP-ENV-05, "Chemical Management"
- GBP-PUR-03, "Credit Card Purchasing System"
- SWP-CHE-05, "Chemical Management Program for Columbia"

Prior to bringing chemical materials onto EN property, personnel must provide a current Safety Data Sheet (SDS) to the business unit SDS custodian and obtain approval from the custodian prior to use.

Chemical containers shall be labeled, tagged or marked with the **identity** (trade name), appropriate **health hazard** warnings, and **name** of the chemical manufacturer, importer or other responsible party.



ISPM-12, Hearing Loss Prevention Program

Requirements include:

- Audiometric testing
- Posting of high noise areas

All personnel are responsible for maintaining personal hearing protection devices in good working condition and wearing hearing protection as designed and intended in high noise work areas.

Hearing protectors are provided by the individual departments and should have a noise reduction rating (NRR) of 25 or greater.

At all EN facilities, ear plugs must have lanyards attached to prevent loss of the plugs in equipment (FME program).

ISPM-13, High Temperature Work Areas

Requirements include:

- Supervisor oversight
- Heat stress monitoring instruments
- Observing for signs and symptoms of heat stress
- Work regimentation compensatory measures
- Heat stress precautions
- Personal protective equipment (PPE)
- Qualifications include: Training for operating heat stress instruments and medical clearance qualifications

Heat stress monitoring, up to and including obtaining a Wet Bulb Globe temperature reading, is required when Dry Bulb temperatures are **at or above 89° F** when workers are wearing regular work clothes; **at or above 77° F** when workers are wearing double layers of clothing; and **at or above 52° F** when workers are wearing nonbreathing clothing.

Wet Bulb Globe temperatures **at or above 77° F** may result in restricted action times.

For outdoor work when temperatures are **at or above 80° F**, there are additional required actions for worker safety (e.g. access to drinking water and shade, mandatory breaks periods, using the buddy system/observation, etc.).

If personnel are required to work in an area with an action time of less than 60 minutes OR they are required to wear plastic protective clothing, ensure that they are medically cleared by Occupational Health to work in high temperature work areas (SFAI qualification group).

Personnel are required to complete Form 26491 and provide to Occupational Health prior to being qualified for SFAI High Temperature Work.



ISPM-14, Job Hazard Analysis (JHA)

Requirements include:

- This ISPM establishes the minimum requirements for integrating activity-based JHA into applicable field work. The JHA process is used to identify, evaluate, control and communicate potential hazards relative to work activities.
- The scope of this ISPM covers industrial safety hazards as well as guidelines and methodology for deviating from established safety procedures (e.g. guarding, PPE, including hard hats where required).
- A JHA originator is designated by the organization they support to initiate and facilitate the JHA process.
- The supervisor ensures the safe and compliant performance of the work in accordance with the work document and JHA.

A JHA will be performed when the physical work activity meets one or more of the criteria established in ISPM-14, which is in alignment with industrial safety high-risk activities per PPM 1.3.76.

- A JHA is required for the items in ISPM-14, section 3.1.1. JHAs can be completed on other tasks as appropriate.
- JHAs can be reused for repeat work if hazards have not changed.

During declared Columbia Generating Station emergencies (alert or higher classification), emergency response activities directed by the shift manager or manager of an emergency response facility (e.g., Technical Support Center, Operations Support Center, Emergency Operations Facility) may be exempted from the requirements of the ISPMs and SWP-OSH-03 procedures by approval from the shift manager, emergency director, or OSC manager and documenting the deviation in the ERO center manager's event/response log.

ISPM-15, Material Handling

Requirements include:

- Manually lifting and carrying
- Carts, hand trucks and dollies
- Powered industrial trucks (forklifts)
- Safe jacking operations

If moving material more than 200 pounds with nonpowered material devices **AND** the load including the device plus attachments and/or carts is configured with a center of gravity higher than the midpoint of the assembly **OR** center of gravity is unknown, **THEN** use of **Form 26603, “Material Handling Safety Plan Checklist,”** is required.

For manual lifting, use the proper lifting techniques and know your own limitations to avoid injuries.

Carts, hand trucks and dollies will have the load capacity identified on each device.

Heavy objects such as deck plates, grating, maintenance access covers or electrical vault covers will only be handled with mechanical equipment.

Forklift operators will be qualified to operate the equipment.

All jacks should be used according to the manufacturer’s recommendations. A plan should be developed and communicated to affected workers **BEFORE** the jacking operation begins. The plan should include load-handling procedures and communication methods.

ISPM-16, Personal Protective Equipment (PPE)

Requirements include:

- Eye protection
- Face protection
- Head protection
- Hearing protection
- Clothing, jewelry and attire
- Foot protection
- Hand protection
- Knee protection
- Welding, cutting, brazing and grinding PPE

Supervisors are responsible for providing PPE for their personnel — including selection, purchasing, storing and issuing — and for increasing PPE requirements based on work activities in certain areas and to appropriately post these areas in accordance with ISPM-18.

Personnel at all EN facilities shall use appropriate ANSI Z87.1 approved **eye protection** with side shields in areas when exposed to eye hazards (Review ISPM-16 for specified areas).

Goggles must be worn when engaged in grinding, chipping, sanding, buffing, blending or performing other operations that create small particles, create dust or could cause eye hazards that could bypass regular safety glasses and enter the eyes.

Face protection must be used in areas that contain hazards from flying particles, molten metals, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

Personnel at all EN facilities shall wear ANSI Z89.1 approved “Type I or II, Class E” hard hats wherever hazards exist from overhead objects and falling or flying materials.

Personnel at all EN facilities shall wear **hearing protection** with a noise reduction rating (NRR) of 25 or greater in high noise areas or near activities that produce high noise (Review ISPM-16 for specified areas).

At Columbia and associated industrial buildings **ear plugs** brought into the buildings must have attached lanyards.

Personnel in the plant and associated industrial buildings/facilities shall wear **protective footwear** constructed of leather or equivalent material uppers with a sole of leather or a material of equal resistance to puncture that provides protection and support up to the ankles.

Personnel at all EN facilities shall wear **hard-toed safety shoes**, or over-shoe safety guards that meet or exceed ANSI Z41.1, ASTM F2412 or ASTM F2413 standards when working in areas where there is a danger of foot injuries due to falling or rolling objects or objects piercing the sole.

The wearing of open-toed, open-heeled and high-heeled footwear is restricted at many EN facilities. Refer to ISPM-16 and GBP-HR-43 and consult with your supervisor prior to wearing these types of footwear.

Personnel at all EN facilities will wear **gloves** appropriate for the hazard when engaged in maintenance and operational work activities or other physical work activities. Refer to ISPM-16 for selecting the correct glove for the hand hazard.

Personnel at all EN facilities will utilize **knee padding** when exposing the knees to surfaces that could cause lacerations, abrasive injuries or puncture wounds. Also use knee padding when performing work requiring prolonged kneeling on non-padded surfaces.

ISPM-17, Respiratory Protection

Requirements include:

- Respirator use
- Respirator program
- Emergency use
- Voluntary use
- Types of approved respirators
- Qualifications required to use respiratory equipment

All respiratory equipment used for radiological protection will be approved by Chemistry & Radiation Protection.

All respiratory equipment used for industrial safety protection will be approved by industrial safety.

Personnel at all EN facilities must be medically approved, trained and pass mask fit tests as appropriate prior to using any respiratory protection equipment. This includes voluntary respirator use.

EN contractors may use contractor owned respirators for industrial safety purposes, if the contractor has a current respiratory protection program in place and the contractor is in full compliance with that program. The contractor respiratory protection program must meet or exceed Washington state requirements. The contract technical representative must maintain on file an up-to-date copy of the program and a signed statement from the contractor that the company's respiratory protection program is in full compliance with all Washington state respiratory protection requirements.

ISPM-18, Safety Administrative Controls

Requirements include:

- Working alone
- Signs – **DANGER**, **CAUTION** or **NOTICE**

A **DANGER** sign (Form 26967) will be used only where an immediate serious hazard exists.

A **CAUTION** sign (Form 26966) will be used only to warn against potential hazards or to caution against unsafe practices.

A **NOTICE** sign (Form 26968) is used where there is a need for general instructions relative to safety measures.



All sections of signs templates will be completed including listing of specific PPE for the area rather than just saying “standard PPE.” Make sure signs are removed when the hazard is no longer present.

When placing temporary physical barriers or danger/caution tape, they should be placed in a manner that does not pose a hazard to workers or equipment.

Danger barriers shall be honored with the same level of respect that is given to a danger tag used on equipment.

Violation of danger barriers may warrant the same level of disciplinary action associated with clearance order violations.

Caution barriers may be entered if personnel have a true business need to cross the barrier, understand the identified hazard, have proper PPE donned and can comply with all other entry requirements.

Temporary physical barriers will be able to withstand a minimum of 200 pounds pressure applied in any direction.

ISPM-19, Tools, Machinery, Equipment and Vehicle Safety

Requirements include:

- Hand tools
- Explosive actuated tools
- Pneumatic powered tools and hoses
- Non-pneumatic hoses
- Machine guarding
- Emergency washing equipment
- Loading and unloading of heavy-duty vehicle
- Qualifications may include: current state driver's license, explosive activated tool qualification card

Tool safety guards required by the manufacturer must remain attached and in proper working order.

Utility knives used at EN facilities will be self-retracting and spring activated.

Whip check restraint devices or safety clips will be used on pneumatic hoses over 3/4 inch inside diameter.

Chicago style couplings require the use of a pin or a whip restraint.

When the chemical SDS states that emergency washing equipment needs to be available, then emergency washing equipment shall be provided at locations where the chemical hazards exist.

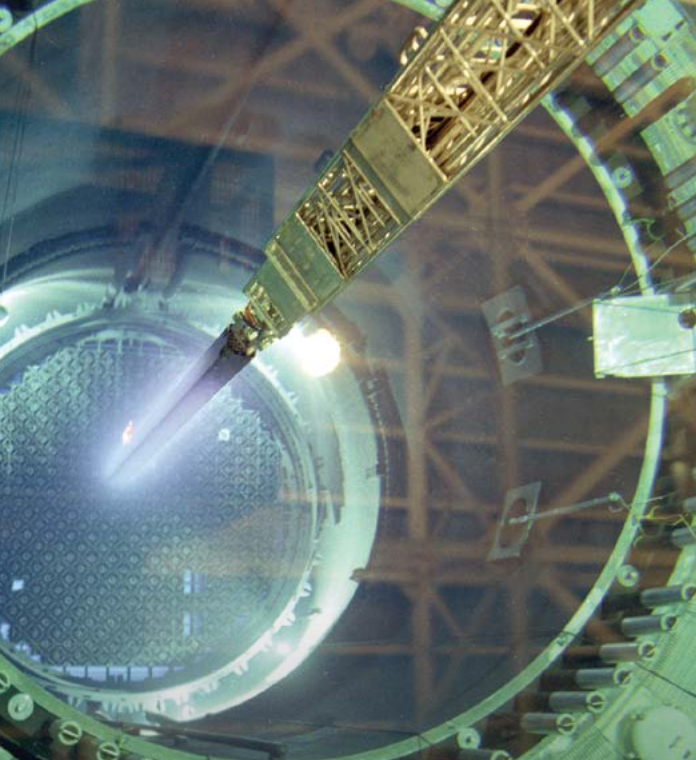
Seat belts shall be worn at all times by vehicle drivers and all passengers when the vehicle is moving.

All personnel will perform a 360° inspection of a vehicle and surrounding area prior to driving the vehicle for the purpose of identifying any obstructions, vehicle damage or visible vehicle deficiencies.

Vehicles should not be left unattended while the motor is running: See ISPM-19, section 3.7, for remote start guidance.

When heavy-duty trucks and/or trailers are being unloaded or loaded, perform the above requirements **AND** chock wheels on at least one axle of the truck, support any trailers with fixed jacks **AND** use dock locks where available.

For all vehicles purchased, leased or acquired by Facilities & Commercial Engineering, all maintenance and troubleshooting is to be performed or directed by Facilities-approved vehicle shop workers or by an approved vehicle repair/heavy equipment repair contractor or vendor.



Danger and caution signs shall be posted in color. Black and white signs are prohibited.

Check ISPM-18 for requirements prior to posting.

ISPM-20, Electrical Safety Arc Protection Work Practices and PPE

Requirements include:

- Safe work practices
- Voltage verification
- Fuse removal and installation
- Establish protection boundaries
- Arc face shields
- Apparel, flame-resistant clothing, flash suits
- Voltage rated glove use
- Qualifications may be needed for electrical work

Live-Dead-Live tests will always be performed regardless of whether electrical energy is expected or not when performing work on electrical equipment.

A restricted approach boundary, limited approach boundary and arc flash boundary will be established as identified in ISPM-20 prior to conducting work on or near energized equipment.

Workers shall remove, or render nonconductive, all jewelry and other potentially conductive items when working in close proximity to exposed, energized equipment.

Workers will wear eye protection under face shields or hoods, will wear hearing protection and will use insulated tools whenever working within an arc flash boundary.

Unqualified workers are not allowed to cross any protective boundary established under ISPM-20.

A minimum of two qualified workers are required for work within a restricted approach boundary of exposed energized equipment operating at 300 VAC or more unless a designated safety observer is assigned.

Protective equipment includes voltage rated gloves, insulated tools and barriers to prevent electrical shock.

Workers shall stand clear, preferably to the hinged side of the door, when operating circuit breakers or disconnect devices when practical.

ISPM-21, Occupational Health

Requirements include:

- Inspection and maintenance of first-aid kits
- Automated external defibrillators (AEDs)
- Qualifications may be needed for defibrillator use

Managers/supervisors are responsible for maintaining first-aid kits purchased for department use and for performing quarterly inspections. Initial purchase, including kit contents, will be in accordance with ISPM-21.

AEDs are located in various buildings, strategically located around Columbia and also available at remote facilities. See ISPM-21 for detailed location information. If more AEDs are desired for projects and new facilities, contact Occupational Health at (509) 377-2416.

Personnel who are trained to provide first aid are responsible to provide first aid in accordance with their training qualification and applicable EN policies and procedures.

The requirements of the following procedures apply:

- PPM 1.9.14, "On-Site Medical Emergencies"
- PPM 13.14.4, "Emergency Equipment Maintenance and Testing"

ISPM-22, Asbestos

Requirements include:

- The requirements and responsibilities for activities involving the limited asbestos removal and handling activities at EN facilities.
- The training requirements for the limited asbestos handling activities that are allowed to be performed by employees and certain contractors.

EN workers and non-asbestos certified and licensed contract employees are not qualified to perform asbestos abatement work with one exception.

Exception: Work not considered an asbestos project that involves the handling of intact, non-friable gasket type material, intact, non-friable valve/pump packing or intact, non-friable floor covering is permitted.

All work involving asbestos containing material (ACM) or presumed asbestos containing material (PACM) must be performed by certified and licensed asbestos abatement workers.

Organizations performing work at EN facilities (e.g., Columbia Generating Station maintenance, Facilities & Commercial Engineering, Site Support Services contractor, etc) are responsible for the following:

- Ensuring workers are appropriately trained to be aware of asbestos hazards.
- Identifying potential asbestos hazards.
- Contracting with a certified asbestos contractor when asbestos removal support is necessary.
- Assigning a contract technical representative to oversee asbestos removal contractors.
- Replacing asbestos with acceptable non-asbestos material when activities provide an appropriate opportunity.

ISPM-23, Lead Containing Material Handling

Requirements include:

- The requirements and responsibilities for activities involving the limited non-aggressive handling of lead containing material.
- The training requirements for limited lead handling activities allowed to be performed by employees and certain contractors.
- Instructions on how to complete a lead containing material compliance plan prior to performing work with lead containing material.

This procedure applies to work activities involving removal of lead-based paints or lead containing material that may cause airborne lead particulate concentrations, including, but not limited to, the following processes: abrasive blasting, welding, burning, cutting, brazing, soldering, scraping or grinding; use of needle guns and chipping hammers; chemical removal on lead-

containing materials or surfaces; cleaning and handling of lead contaminated waste; the cleanup of paint dust and debris, spent abrasive blasting media, and waste resulting from lead related operations; and air sampling.

This procedure also applies to work activities that involve fixed sources of lead including, but not limited to, lead bricks, lead shot, lead blankets, lead shielding, lead seals, lead containing solder, lead weights, spent bullets and lead batteries.

ISPM-24, Energy Northwest Safety Committee

Requirements include:

- This ISPM describes the function of the EN Safety Committee. It provides the methodology to be used in selecting committee members, as well as the committee composition and leadership.
- Responsibilities of senior leadership, managers, supervisors and employees for support of this corporate committee.
- Establishes subcommittees, the subcommittee membership, duties and responsibilities.

ADDITIONAL STANDARDS

Corrective Action Program (CAP)

SWP-CAP-01

As nuclear professionals we must maintain a low threshold for identification of conditions adverse to quality (CAQ) to ensure appropriate and timely resolution. This is done through the CAP. Refer to SWP-CAP-01 for additional guidance on significant conditions adverse to quality (SCAQ) and CAQ.

For problems that do NOT affect plant equipment, safety or regulatory requirements, the non-regulatory action program may be used, GBP-CAP-01. However, it may be acceptable to use other methods for resolution (e.g., work requests, information technology requests, self-actions). Please consult with your supervisor, as necessary.

Condition reports (CRs) are documents initiated by any employee or contractor that identify a known or potential issue or condition. Guidance for writing a CR is contained in SWP-CAP-01.

One of the following methods MUST be used to initiate a CR:

- From the Network folder, select Initiate Condition Report icon.
- From the “Applications” tab on the Current, select the Initiate Condition Report link.
- From the Asset Suite Navigator – Energy Northwest Custom Flows, select Initiate Condition Report link.
- Via hard copy, complete Form 26276, “Energy Northwest Condition Report.”
- From the Asset Suite Navigator – Energy Northwest Custom Flows, select Anonymous CR Screening (if you wish to remain anonymous).

As an EN employee or contractor, your responsibilities include the following:

- Identify any CAQ by writing a CR. This includes any issue or potential issue that may need to be corrected or reviewed for operability by the shift manager, including equipment, design or process problems. Workers should write CRs as soon as possible, but no later than the end of the shift the issue is identified.
- Notify the main control room if the condition is known or suspected to involve an immediate threat to personnel safety, nuclear safety, equipment operability, equipment functionality, the environment, an uncontrolled release of radioactive material, a threat to station security or is potentially reportable to an outside agency.
- Provide a clear and concise description of the condition in sufficient detail for an independent evaluation of the condition's significance.



Transient Equipment and Seismic Storage

PPM 10.2.222

Transient equipment is nonpermanent plant equipment, tools, parts and materials necessary to conduct plant operations, maintenance activities or modifications, and perform testing activities. When bringing transient equipment into the plant for work it should not be stored next to safety-related equipment or components. Workers should consider where it will be staged, placed or stored and what could happen if the item were to slide, tip or fall. Potential for both equipment damage and personnel safety should be well thought out.

When staging or storing transient equipment:

- Assume all plant equipment is safety-related equipment.
- The transient equipment's height plus 12" away from the safety-related equipment meet or exceed the tipping/overturning and slide requirements.
- On two-wheeled transient items, chock or lock at least one wheel. For three wheels or more, chock or lock at least two wheels.

Foreign Material Exclusion (FME)

PPM 10.1.13

Foreign material exclusion is the process of preventing foreign material (FM) from entering systems and components through effective behaviors. Foreign material is any material not part of the system or component and not intended to be there. Never assume items are easy to retrieve; always prevent FM from entering the system in the first place. Preventing the introduction of FM into a system or component requires a careful, thought out approach by all personnel. Ask yourself what kind of FM can be introduced while you are working and incorporate the prevention technique into your work. A small metal chip can

cause equipment degradation or inoperability, fuel cladding damage, increased dose and nuclear safety issues in the plant. When working at Columbia, you are expected to adhere to the requirements of the FME program, governed by PPM 10.1.13.

Key points to remember while you work are:

- Discuss FME in your pre-job briefs using the FME checklist.
- Ensure job specific FME project plans are used for the job and covered in pre-job briefs.
- Pre-stage all FME materials before opening systems. (Consider laying tarps and other capture devices to prevent housekeeping issues in and around work areas and adjacent equipment.)
- Ensure the correct FME practices are implemented at the job (signage, barriers, lanyards, use of covers, internal barriers, removing personal items, etc.).
- Focus behaviors on preventing FM from entering the area. Every person has a role in prevention.
- Do not take prohibited items into an FME area (clear plastic or glass, wire wheels or brushes if not approved).
- Notify your supervisor if you have a loss of FM or find FM in a system.
- Always perform a thorough FME close-out inspection before system closure.
- Ask for help if you are unsure about FME practices or requirements.

Housekeeping and Material Condition

SWP-MAI-02

Station material condition and housekeeping are the responsibility of each individual working at EN. The individual or group performing the work should have a clean-as-you-go approach for the work area and affected equipment. Housekeeping should not wait until the end of the job to be performed. Ensure cleanliness, orderliness and material conditions are maintained at all times. It is expected that the as-left condition of the area and equipment is as good or better than the as-found condition. The last step in every process is to ensure the work area is cleaned and housekeeping standards have been maintained prior to taking a task to finish.

Some considerations are:

- Tools and materials need to be arranged in a neat and orderly manner.
- Hang a work in progress or a staged material sign at the work area if you are not going to be in constant contact with the area or staged material.
- Aisles, passageways and approaches to equipment shall be kept clear of obstructions and tripping hazards.
- Do not allow debris, dirt and waste material to accumulate and clutter the work area. Dispose of these items as they are created in the appropriate receptacles.
- Protect floors from damage from dropping tools, material, scaffolding, etc.
- Perform a visual inspection of the area and remove and dispose of all signs, duct tape, boundary markings or barriers when the job is completed.
- Non-power block structure housekeeping is owned by Facilities & Commercial Engineering.

- Power block structure housekeeping is owned by Maintenance.
- Procedural guidance: SWP-MAI-02.
- Refer to ISPM-1 for quarterly workplace inspection requirements.

Plant Component Status Control (PCSC) (PPM 1.3.81)

PCSC = PERMISSION + CONTROLS

PERMISSION is AUTHORIZATION FROM OPERATIONS before manipulating any plant equipment or system. Specifically, approval is given by the shift manager, control room supervisor or the production senior reactor operator.

CONTROLS is the use of an APPROVED TRACKING METHOD such as procedures, work instructions or clearance orders. Approved procedures and instructions provide specific guidance to operate plant components.

Both PERMISSION and CONTROLS is always required PRIOR to operating any component.

Bump prevention

ALL EMPLOYEES are responsible to identify hazards in work areas using Take 2.

What is a bump hazard?

Any positionable component (e.g., switch, valve operator, push button, damper actuator) within 2 feet of the work area.

What if a bump hazard exists in the work area?

STOP! Engage Operations before proceeding.

Operations personnel will determine appropriate barriers and/or develop contingencies. ONLY OPERATIONS personnel may install or remove a bump barrier, bump prevention device or component locking device as needed to perform a task.

What are STAY CLEAR areas and postings?

The purpose of STAY CLEAR areas is to prevent inadvertent operation of plant equipment by increasing awareness.

Can I enter a STAY CLEAR area?

NO, unless the individual:

- Has been briefed and authorized entry by the control room supervisor, shift manager or production senior reactor operator.
- Is an Operator performing watch station activities or alarm/emergent response activities.

What if I accidentally bump a component?

STOP and immediately NOTIFY the control room – do not re-position the component!



Radiological Protection Program **(SWP-RPP-01, GEN- RPP PROCEDURES & VOL. 11 PPMs)**

Compliance to radiation protection controls is the responsibility of each individual.

The Radiation Protection Program at Columbia is designed to protect plant workers and the public from the harmful effects of radiation and radioactive material. Procedures and processes control the radiological aspects of work at Columbia by qualified Radiation Protection (RP) staff and ensure that exposures are maintained “as low as reasonably achievable” (ALARA).

Personnel are responsible for their dose and ensuring their radiological work practices do not result in any personal contamination event (PCE), electronic dosimeter dose alarm or an unanticipated dose rate alarm. Personnel are restricted from the radiologically controlled area (RCA) in these cases and RP workers are required to follow approved procedures in order to reinstate access. Radworker behaviors factor in to how and if a worker’s access is reinstated to the RCA.

Personnel should be prepared to answer the following questions prior to entering the RCA:

- Why are you going into the RCA?
- What radiation work permit (RWP) are you logging in on?
- Do you know the radiological conditions in your travel path/ proposed work area?
- How are you going to minimize your dose while in the RCA and what is your entry dose goal?
- Will my work affect others in the area?
- What radiological postings are in your work area? (i.e., radiation area, contaminated area, etc.)

- Are there any posted areas in my work area or travel path that I am not authorized to enter?
- What are your electronic dosimeter (ED) set points?
- How often must you check the reading on your ED?

Additionally, personnel are expected to have a completed RCA trip ticket appropriate to the scope and location of their work and be knowledgeable of the radiological conditions in their work area.

Important Radworker Standards

- Common hand tools are not free-released from an RCA without approval from your department manager and RP manager.
- If you are using scaffold or porous materials such as fall protection, do not use in a contaminated area without RP approval.
- Do not access areas above 7 feet without RP approval.
- Do not breach a system without RP approval.
- Do not move any radiological postings without RP present.
- Tools returned to the hot tool crib require survey prior to restocking. See attendant for direction.
- An RP technician is required to remove any item from the fuel pool/refueling pit cavity.
- Exit the area immediately and report any ED dose alarm or unanticipated dose rate alarm to RP.
- Do not perform self-decontamination without RP direction.
- Do not move shielding without RP approval or direction.
- Do not move radioactive material outside the RCA without RP direction.
- RP manager approval is required for any new radioactive material area outside the main RCA.
- Dosimeter of legal record (DLR) and security badges will be attached to a lanyard that is worn around the neck at all times while on-site. See SWP-SEC-03, "Security Responsibilities of Site Personnel," for additional information.

Radioactive Waste Management

Radwaste reduction is a focus of concern at Columbia. To reduce the amount of radioactive waste to be disposed, individuals must first reduce the amount of material brought into the plant. The handling and disposal of all waste generated at Columbia, radioactive and nonradioactive, is costly. "Clean waste" is also a problem due to the amount of time taken to monitor (frisk) the clean material (garbage) from the RCA.

Three steps to waste management

1. Produce less

- All unnecessary material that may become radioactive waste must be kept out of the RCA. Each person is responsible to remove all unnecessary packing material prior to RCA entry.
- If packing material cannot be removed prior to RCA entry, then contact RP at (509) 377-2245.
- For transfer of material into the plant through a roll up door, contact the shift support supervisor at (509) 377-8434 or production at (509) 377-2024.

2. Reuse as much as possible

- There is an excellent supply of fixed contaminated tools in the tool crib for use in the RCA. For tool availability, contact the tool crib at (509) 377-2316. Please use the tool crib as much as possible.

3. Do not mix liquid and dry waste

- Dispose of liquid and dry radioactive waste separately.

Protected Equipment

PPM 1.3.83

Equipment in a nuclear power plant is built to very high standards but some components are sensitive to bumping or radio interference. Postings and barriers often surround these areas to prevent accidental contact or interference.

At times, extra barriers are put in place around equipment needed for reliability. These areas are identified as PROTECTED. When such postings are observed, stay out of the area. Only authorized qualified workers and operators with specific briefings and oversight may enter these areas. It is not acceptable to walk through an area marked as protected.

The protected equipment signage is to clearly communicate that workers are to stay clear of the affected area unless authorized by the shift manager.

The signs generally used to identify the equipment and areas are below:



Other signs may be used in cases where the placement of the standard sign may increase risk or is not practical for reasons such as limited space.

Risk Management

EN's overarching imperative is to maintain the health and safety of the public and its employees through excellent operation of all agency activities. Excellent operation requires agency risk to be managed effectively. The importance of risk management cannot be overstated. Operating experience throughout the nuclear and broader energy sectors demonstrate the importance of continuously challenging assumptions and being on the lookout for possible risks that could prevent our ability to be safe, reliable and predictable; we must make risk management part of our core business every day. The agency has a collection of risk management principles, behaviors and formal processes established to help systematically identify, eliminate, minimize, manage, communicate and monitor risks across the agency, including operation of our nuclear power plant. Review Excellence Model chapter 5: Risk Management is Core Business. Effective application of integrated risk management is a core function for everyone involved in decision-making and conducting work at the agency.

Risk in simple terms is what could go wrong and prevent the agency from meeting its objectives. Risk is the possibility of threat of damage, injury, liability, loss, or other negative occurrence, caused by inherent external or internal vulnerabilities.

Risk combines the likelihood (probability) of an undesired action and its consequences:

$$\text{Risk} = \text{Likelihood} \times \text{Consequence}$$

Risk management is the systematic approach we use to identify and evaluate risks created by human activities, inherent conditions and external influences, and pinpoints ways to mitigate and control them. Some examples of inherent risk we deal with each

day include: first-of-a-kind evolutions and activities, changing plant conditions, emergent issues, stakeholder and public perception, weather, business goals, regulations and laws, etc. An understanding of how risk across the agency influences or impacts other agency activities (referred to as integrated risk), can significantly reduce the potential for events and positively affect the long-term viability of EN. Risk management is effective when the controls and barriers most appropriate to either eliminate or minimize the risk are identified and applied, while recognizing the need to plan contingencies to deal with the remaining residual risk when all risk cannot be eliminated. Identifying something that can be a problem and proactively taking action is the philosophy behind risk management at EN and applies to all activities across all assets and services.

The following are a set of risk management behaviors and principles that should be used when faced with an elevated risk situation or when making a risk-related decision. An understanding of risk, with emphasis on integrated risk management, can significantly reduce the potential for events and positively affect the long-term viability of the agency.

To make risk management part of your core business, ask yourself these types of questions during your daily activities, whether you are inside a formal risk management process or not:

- What is the worst thing that could happen?
- Do I need to expand the team?
- Does my supervisor know?
- What process am I in?
- Do I need to stop?

Speak up - stop and engage others when hearing justifications.

Risk Management Guiding Principles

- Nuclear safety is the overriding priority.
- Nothing is “routine.”
- First-of-a-kind and first-in-a-while activities are recognized as higher risk.
- Consequence-biased risk assessment is used to mitigate and manage residual risk.
- Integrated risk is assessed during decision-making.
- Risk inherent in daily activities is managed by individuals at all levels of the organization.
- Risk-significant activities are owned, visible and well communicated.
- Risk activities are planned, documented, challenged and controlled.
- Rigor and formality increase as the level of risk you are facing increases.
- Risks are continuously monitored.

Support Behaviors

- Demonstrate procedure use and adherence.
- Demonstrate proficiency with the Excellence Model and integrated risk management processes.
- Apply operating experience.
- Continuously identify and own risk inherent in your daily activities.
- Use Give 2 and Take 2 daily to assess risk prior to performing work.
- Seek to understand the consequences of your activities.
- Pursue the “no risk” option.
- Avoid complacency, bias, rationalizing and assumptions.
- Communicate barriers or challenges using the 10/30/60 rule.
- Monitor results and changing conditions.
- Coach to help your peers be successful.

Share any concerns regarding risk with next level supervisor so the decision-making occurs at the appropriate level with as much information as possible.

Risk-Based Decision-Making

Our principles guide us to be conservative. We apply this to decision-making by ensuring our decisions reflect intolerance for unacceptable end-states. Conservative decision-making incorporates understanding the no risk or lowest risk option(s) along with carefully weighing the risk of the action (or inaction) against possible mitigation options. When a no risk option is not possible or reasonable, conservative decision-making, supported by effective use of mitigation and contingency actions, must be used to reduce the probability and/or consequence(s), such that the remaining residual risk is acceptable for the situation.

Security

SWP-SEC-03

- Wear your badge on your upper body on the outermost garments at all times, except in specific radiologically-controlled areas.
- Maintain control of assigned badge at all times, unless surrendered to Security.
- Report lost badges immediately to Security at (509) 377-2185 or (509) 377-2036.
- To keep a security door open for longer than 18 seconds, contact Security via card reader intercom prior to opening the door.
- Know your authorized access areas. If unsure, contact your supervisor or Security at (509) 377-2185 or (509) 377-2036 prior to entering a questionable vital area.
- Be prepared to have your vehicle searched. Keep prohibited and contraband items out of your vehicle and off EN property.

SWP-SEC-15

SWP-SEC-15, "Protected Area Access Restrictions and Reinstatement," provides guidance for placing an access restriction on a worker who has violated a security rule, such as but not limited to the following examples:

- Tailgating – The unauthorized entering of a protected/vital area portal, where one valid badge is presented to the badge reader but one or more people enters or exits the area without presenting their badge.
- Unauthorized access – Attempting to enter an area (protected area, vital area, etc.) to which the individual is not authorized.
- Not following directions given by Security.
- Unauthorized movement of Security signs.
- Escort violations – Leaving a visitor unattended while inside the protected or vital area.
- Vital area doors unsecured – Leaving a vital area door unsecured upon entry or exit.

Should you violate a security rule, your unescorted access will be placed on administrative hold until you and your supervisor meet with Security management, the violation is discussed and you and your supervisor are fully aware of your security responsibilities.

Training

GBP-TQS-01, TDI-04, SWP-TQS-01, TDI-24

- Arrive on time for scheduled training, return from breaks on time and actively participate in training.
- Identify training needs using the training request (TREQ) process.
- Apply learning from training to the job.
- Provide clear, concise, constructive feedback to help continuously improve our training programs.
- Check your qualifications before performing the task and know what work those qualifications allow you to perform.
- Challenge assignment of work for which you are not qualified.
- Follow exam protocols/instructions during tests and examinations.

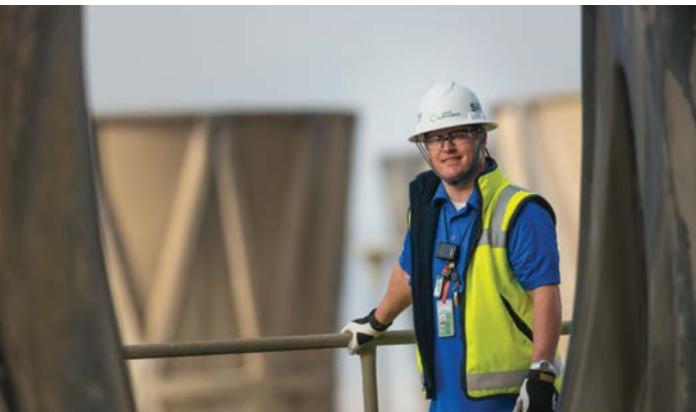
Emergency Preparedness

ERO on-call and response expectations:

Emergency Response Organization (ERO) members have a duty to remain prepared to respond to ERO notifications.

- ERO members must know which team they are on, when they are on-call and remain fit for duty (FFD) while on call.
 - To access this ERO information, go to the Current home page, click on the ERO icon, then select "ERO Rosters Schedules," then "ERO - Org Chart by Center and Position" or "Team Schedule" for the calendar year.
- All essential and on-call augmenting positions must keep their pagers in a condition and location where they can hear the alarm when activated.
- Be able to respond as rapidly as safely possible and within 60 minutes of pager activation (essential and augmenting positions) or notification by phone (support positions).

- All ERO members must know how to respond to notification messages.
- Response cards for each category are available in the information basket at the entrances to the Deschutes, Kootenai, protected area access point (PAAP), in the Multipurpose Facility (MPF) or from Emergency Preparedness.
- ERO members must keep their contact phone number current in Workday and notify the assistant for Operations Support any time their cellphone number is updated.
- ERO members on teams A, B, C and D who meet the requirements of GBP-HR-14 are eligible to earn up to one day off during each half of the calendar year. See GBP-HR-14 for details. Contact any EP member to arrange to join the on-call ERO.
- To log your supervisor-approved ERO days off, log regular time under work order # 0208980801.



COMMONLY USED PROCEDURES/FORMS

DOC	TITLE
GBP-CAP-01	Non-Regulatory Action Program
GBP-COM-02	Developing Content for Internal Communication Tools
GBP-COM-06	Chief Executive Officer Event Notification
GBP-EPP-01	Non-Nuclear Emergency Plan
GBP-ENV-20	Wildlife Response Program
GBP-ERM-03	Enterprise Risk Management Program
GBP-FAC-01	Lock and Key Control
GBP-FAC-02	Energy Northwest Vehicle Program
GBP-FAC-03	Facilities Space Management and Allocation
GBP-FAC-04	Non-Power Block Clearance Orders
GBP-HR-39	Handling of Personal Health Information
GBP-HR-10	Work Schedules (Including Adverse Conditions)
GBP-HR-43	Work Attire
GBP-IRP-02	Injury Classification
GBP-LEG-01	Code of Ethics
GBP-SEC-06	Energy Northwest Parking Areas
FPP-1.3	Permit Controls for Non-Plant Fire Protection Systems Impairments & Ignition Sources
PPM 1.3.64	Plant Clearance Order
PPM 1.3.10	Plant Fire Protection Program Implementation
PPM 1.3.10A	Control of Ignition Sources
PPM 1.3.10B	Active Fire System Operability and Impairment Control
PPM 1.3.10C	Control of Combustibles
PPM 1.3.56	Conduct of Maintenance
PPM 1.3.57	Barrier Impairment

DOC	TITLE
PPM 1.3.72	Control of RF Transmitting Devices
PPM 1.3.76	Integrated Risk Management
PPM 1.4.7	Control of Supplemental Personnel
PPM 1.9.13	Transformer Yard Access and Controls
PPM 1.9.14	On-Site Medical Emergencies
PPM 10.1.19	Columbia Diving Instructions
PPM 10.2.222	Transient Equipment and Seismic Storage
PPM 10.2.32	Soil Excavation, Backfill and Compaction
PPM 10.2.53	Scaffolding
PPM 10.4.3	Sling Inspection, Maintenance and Testing
PPM 10.4.4	Mobile Crane Operation, Inspection, Testing and Maintenance
PPM 10.4.12	Crane, Hoist, Lifting Device and Rigging Program Control
PPM 10.4.14	Miscellaneous Load Handling
PPM ABN-WIND	Tornado/High Winds
PPM-GEN-TQS-01	Training Program Administration
Standard-01	Worker Error-Prevention tools
Standard-02	Observation & Coaching Program
Standard-03	Technical Human Performance Tools
Standard-04	Event-Free Days (EFD) Clock Program
SWP-CAP-01	Corrective Action Program
GPB-ENV-18	Oil and Hazardous Substances Spill Prevention
SWP-FFD-01	Fitness for Duty Program Requirements
SWP-FFD-02	Behavioral Observation Program
SWP-FFD-03	Fatigue Management
SWP-MAI-02	Station Materiel Condition Inspection and Housekeeping Program
SWP-SEC-07	Nuclear Power Plant Access Authorization Program
MI-1.1	Maintenance Instruction Administration

DOC	TITLE
MI-1.10	Assignment To Maintenance Positions
MI-1.10.1	Maintenance Overtime General Guidelines
MI-1.10.2	FFD Fatigue Management Maintenance Department Desk
MI-1.11	Training Expectations
MI-1.17	USA Maintenance Personnel at Columbia Generating Station
MI-1.21	Vacation Request Approval
MI-1.22	Maintenance Planning Program
MI-1.22A	Maintenance Planner's Guide
MI-1.25	Maintenance Log and Communication
MI-1.29	MP Cal/Test – Calibration Instructions
MI-1.3	Maintenance Task Lead
MI-1.30	Maintenance Records Administration
MI-1.33	Maintenance Work Assignments to Supplemental Personnel
MI-1.34	Maintenance Procedure Writers Guide
MI-1.35	Credit Work Order Process
MI-1.36	Maintenance Refueling Outage Preparation and Execution
MI-1.6	Peer Verification Program
MI-1.9	Maintenance Fix-It-Now Team
MI-1.9.1	Rework Accountability Program
MI-2.10	Maintenance Parts Interim Storage
MI-2.2	I&C Work Practices Manual
MI-2.2.1	Instrument Maintenance Procedures
MI-2.3.12	AC Ground Troubleshooting
MI-2.3.14	Maintenance and Testing of Hot Sticks and Grounding Cables
MI-2.3.16	Test Equipment Operating Instructions

DOC	TITLE
MI-2.3.3	Motor Operated Valve (MOV) Diagnostic Data
MI-2.4.6	Fluid Leak Management Program
MI-3.6.3	Performance of Maintenance when Asset Suite is Unavailable
MI-3.6.4	Work Package Closure
MI-3.6.5	Emergent Work Activities Shift Coverage
MI-3.8	Transformer Yard Coordinator Roles and Responsibilities
OI-03	Operations Crew Schedule Review
OI-04	Monitoring Fuel Using Acumen
OI-07	Training Expectations
OI-09	Operations Standards and Expectation
OI-11	Addition of Lubricants to Plant Equipment
OI-12	Clearance Order Instruction
OI-13	Overtime Guidelines
OI-14	Columbia Generating Station Operational Challenges and Risk Program
OI-15	EOP and EAL Clarifications
OI-16	License Stipend Program
OI-18	Equipment Operator Rounds
OI-19	Down Power Profile Development
OI-23	Performance Improvement Program
OI-27	Hiring Initial Class Selection and Monitoring
OI-28	Selection, Mentoring, and Professional Development for Shift Managers
OI-34	Notifications
OI-35	Conduct of Event Debriefs and Operator Fundamentals
OI-36	Notifications
OI-37	Operations Shift Team Career Plan and Rotational Assignments

DOC	TITLE
OI-38	Operations Manpower Scheduling
OI-40	Human Factoring
OI-41	Operations Work Control Expectations
OI-45	Color Banding of Control Room Instrumentation
OI-47	BPA and Luminant POC Communication Principals
OI-51	Ops Outage Preparation
OI-53	Offsite Power
OI-54	Operations Qualification Management
OI-57	Operations Department Attendance Standards and Expectations
OI-58	Operations Department FFD Fatigue Management Desktop
OI-59	On-Shift Exempt Time Reporting
OI-64	Operations Department Crew Management Review Meeting
OI-65	Spent Fuel Pool Time-to-200 Guidelines
OI-69	Time Critical Operator Actions
OI-73	Operations IS Disaster Recovery
OI-74	Station Blackout/ELAP Emergency Response Equipment Sharing Guidance
OI-75	Operability Determination Quality Review Board
OI-76	Operations Work Attire
EGM-1-6	Engineering/Technical Pre-Job Brief/Task Preview
Form No. 26320	Pre-Job Brief Checklist
Form No. 26888	Operations Task Preview Job Aid
Form No. 20009	Maintenance Task Preview/Pre-Job Briefing Checklist
Form No. 23174	Automobile/General Liability /Accident Notice
Form No. 24038	New Hire Checklist

DOC	TITLE
Form No. 26967	Danger Sign
Form No. 26966	Caution Sign
Form No. 26968	Safety Notice (Information) Sign
Form No. 26242	Plant Installed Crane/Hoist Inspection Checklist
Form No. 26389	Plant Installed Manual Chain Hoist Inspection Checklist
Form No. 26263	Mobile, Fixed Crane and Hoist Pre-Job Brief
Form No. 25768	Fall Protection Plan
Form No. 26135	Employee Report of Incident or Near Miss
Form No. 322	Supervisor Evaluation of Incident
Form No. 27159	Industrial Safety Evaluation of Incident
Form No. 27309	Department/Project Outage Industrial Safety Plan
Form No. 26471	Personnel Requirements Form
Form No. 27181	Use of Crane Suspended Personnel Platform Authorization
Form No. 27271	Elevated Work Platform/Aerial Lift Safety Inspection
Form No. 27016	Job Hazard Analysis
ISPM-14	Job Hazard Analysis
Attachment 7.1	
ISPM-14	Planned Deviation from Established Safety Procedures
Attachment 7.2	
ISPM-17	Non-radiological Respirator Authorization
Attachment 7.2	
ISPM-17	Advisory Information for Employees Who Voluntarily Use Respirators
Attachment 7.4	

MY NOTES

GIVE 2

Station Operational Risk Decision Making Tool

▼ **HAVE YOU, DID YOU OR WILL YOU?**

- Encounter triggers?
- Make a quick decision in a silo?
- Work outside of plan/process?
- Pick shortcut for ease/speed?

▼ **STOP AND EXPAND THE TEAM**

- STOP activity, place job site in SAFE condition. NOTIFY your supervisor.

▼ **SUPERVISOR**

- **Enter** proper process/procedure for problem solving/resolution.
- **Assess/Address** the risk.
- **Confirm decision** with peer/manager.
- **Document** your decision.

▼ **RETURN TO WORK**

- **Are all issues addressed?**
- **TP/PJB** done for new plan?
- **Take 2** upon return to work site?

TAKE 2

Take Time To Review Your Job Site

- ▼ Am I on the correct train/component?
- ▼ Am I prepared (task preview, pre-job brief, tools/parts, RP brief)?
- ▼ Do I have the appropriate PPE, FME, and safety barriers in place?
- ▼ Do I have Operations permission to manipulate components?
- ▼ Do I have controls in hand (procedure, work instructions, etc.)?
- ▼ What hazards or energy sources (electrical/mechanical, etc.) are there in the area that could hurt me/others?
- ▼ Is there a component misposition or bump hazard in the work area (2 ft. zone)?
 - If yes, engage Operations
- ▼ What are the expected results of my actions?

**STOP IF UNSURE,
CONTACT YOUR SUPERVISOR.**

POSITIVE SAFETY RECOGNITION

One of our core values at Energy Northwest is Safety First. This isn't just a tagline, it's a commitment from all of us to work safely and protect each other.



The Performance Improvement industrial safety team wants to recognize those individuals who demonstrate excellence in working safely. Examples include but are not limited to the following:

- Finding safer ways of performing work;
- Using a questioning attitude and stopping work when unsafe;
- Using co-worker coaching to prevent incidents and events;
- Going above and beyond concerning a co-workers' safety.

If you see someone demonstrate excellence in safe work, submit them for a **Positive Safety Recognition**.

Scan the QR code with your phone or tablet to recognize someone for positive safety behaviors.



Submissions are reviewed weekly, and awardees are selected by Performance Improvement. For questions, contact the industrial safety team at (509) 377-2723.

IMPORTANT PHONE NUMBERS

Keep these essential phone numbers at your fingertips for quick access in times of need or emergency.

On-site emergency at Columbia Generating Station..... **(509) 377-2222 / ext. 2222**

Fire Marshal.....	(509) 377-4649
Industrial Safety BSAF Hotline.....	(509) 377-2723
Chemistry Lab.....	(509) 377-2166
Control Room Supervisor.....	(509) 377-2432
Environmental & Regulatory Programs.....	(509) 372-5150
Facilities Help Line.....	(509) 377-8484
Facilities On-Call Supervisor.....	(509) 377-8455
Hanford Fire Department.....	(509) 373-2745
HP Desk Main RCA Entrance.....	(509) 377-2245
IS Call Center.....	(509) 377-8400
Laborers.....	(509) 377-2282
Occupational Health Clinic.....	(509) 377-2146
Operations Field Supervisor.....	(509) 377-8434
Outage Command Center.....	(509) 377-1111
Public Affairs On-Call.....	(509) 377-8393
Security Shift Lieutenant.....	(509) 377-2185
Shift Manager Control Room.....	(509) 377-2441
Tool Crib.....	(509) 377-2316
Work Execution Center PSRO.....	(509) 377-2024



ENERGY NORTHWEST

2024-2025 Edition