★★★ CALLAWAY'S ★★★

REFUEL 27 OUTAGE

HANDBOOK

SPRING 2025

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EMERGENCY NUMBERS

**To report any emergency,
incident or unusual condition:**

Dial 911 from Desk Phone
(573.676.8787 from Cell Phone)

To contact a Callaway employee in an emergency:

Dial 573.676.8774
Security 24-hour coverage
CAS - Central Alarm Station

GAITRONICS INFORMATION

Line 1 – Contact the Control Room
(*DO NOT* press page button when speaking)

Line 2 – Operations Department use only

Lines 3 to 5 – General Use

SAFETY/FIRE/EMERGENCY PROCEDURES

In case of the following, consult the appropriate procedure(s):

- Reporting & Processing of Accidents, Injuries & Illnesses - ***APA-ZZ-00835***
- Personal Protective Equipment and Safety Rules - ***Callaway Plant Safe Work Practices Manual***
- Trenching and Shoring Procedure - ***MDP-ZZ-SH001***
- Scaffolding Installation and Evaluation - ***MDP-ZZ-S0001***
- Control of Combustible Materials - ***APA-ZZ-00741***
- Control of Ignition Sources / Hot Work Welding Requirements - ***APA-ZZ-00742***
- Lifting & Rigging Program - ***APA-ZZ-00365***
- Reporting a Fire - ***EIP-ZZ-00226***
- Impairments to Fire Protection Systems - ***APA-ZZ-00701***
- Hazardous Chemical / Oil Spill Response Clean up - ***EIP-ZZ-03010***
- Confined Space - ***APA-ZZ-00802***

OUTAGE SCHEDULE UPDATE PROCESS

- Accurate refuel activity status updates are **CRITICAL** to the execution of Refueling Outages.
- **All** updates are required to be completed **no** later than 1300 for day shift and by end of shift for night shift.
- Updates will be required for the activities on each lead craft schedule per the Plan of the Day (POD). An accurate update consists of an actual start date and time (assuming the activity has started) and **either** a finish date and time **or** a remaining duration from 1400 for day shift (0600 for night shift)
- The outage schedule will be uploaded in EMPRV by 1700 on day shift.

RF27 PHONE LISTING

OUTAGE CONTROL CENTER (OCC)

Engineering	(573) 676-6240 /	(573) 676-8427
Maintenance	(573) 676-6236 /	(573) 676-6239
Operations	(573) 676-6238 /	(573) 676-6241
Shift Outage Mgr. (SOM)		(573) 676-6234
Radiation Protection		(573) 676-6231
Reactor Services		(573) 676-6233
Safety Train Coordinator		(573) 676-6242
Workstations		(573) 676-4079

SENIOR MANAGEMENT

Fadi Diya	SVP & CNO	(573) 823-6531
Kent Scott	Nuclear Site VP	(734) 536-7113
John Beck	VP, Nuclear Engineering	(314) 488-8794
Sarah Kovaleski	Sr. Dir. Nuc. Plant Sup	(573) 489-9435
Travis Hart	Sr. Dir. Nuc. Operations & Plant Mngr.	(573) 338-8452

OUTAGE MANAGEMENT

Shannon Gaydos	Mgr. Outages	(314) 974-7428
Travis Doerhoff	Outage Sched. Supv.	(314) 974-8730
Jeff Perry	Outage Scheduler	(573) 310-7240
Shaunti Wilson	Outage Scheduler	(314) 225-1070

CONTAINMENT COORDINATORS

Larry Russell (D)	CTMT Coordinator	(573) 424-5361
Bruce Huhmann (D)	CTMT Coordinator	(573) 694-6741
Vicky Rider (N)	CTMT Coordinator	(314) 225-1571
Robert Bates (N)	CTMT Coordinator	(816) 351-7272

CONTAINMENT COORDINATORS (Continued)		
Dave Griese (N)	CTMT Coordinator	(636) 887-1132
Jeremy Czeschin (N)	CTMT Coordinator	(573) 592-9218
Erin Smith	CTMT Coordinator	(314) 225-1711

ADMINISTRATION

Amy Findley	Mgr., Administration	(765) 251-1149
Debbie Kuhn	Record Mgmt Sys Supv	(573) 544-5356
Kaylynne Niederer	Record Mgmt Sys Supv	(573) 694-2484

Contact numbers for individual clerical support by dept or work area can be found on the Administration Dept SharePoint under Personnel listing. 24-hr coverage is provided in the Document Control, QC and Work Pkg Areas.

BHI ENERGY

Chris Grimes (D)	Site Manager	(406) 203-2582
Tony Bax (D)	Site Superintendent	(573) 291-2906
Tim Moyer (N)	Site Superintendent	(660) 651-0602

EMPLOYEE CONCERNS

Tracy Davenport, Manager	(573) 220-0541
Nuclear Regulatory Commission (NRC)	(573) 676-8667
ECP Hotline	(866) 676-8500

ENGINEERING

Jacob Kuhlenberg	Dir. Plant Engineering	(314) 288-9879
Todd Witt	Dir. Engineering Design & Reg. Affairs	(314) 225-1543
For Engineering support:		
Engineering War Room – SB 312		(573) 676-8039
Engineering Projects Center – CMB 213		(573) 676-4506
Email Distribution List - @CAL Nuc Eng War Room		
Occ Eng Manager:		(573) 676-8427
Jesse Hutchison		(314) 225-1793
Jesse Norman		(314) 225-8410
Jesse Pitts		(573) 619-2960
Jeremy Morton		(314) 225-1803

ENGINEERING (continued)

J.C. Sellers		(573) 644-4644
Dan Pallardy		(573) 220-8211

IN-PROCESSING /ACCESS AUTH/FITNESS FOR DUTY

Supv Desk Phone	IP/AA/FFD Supervisor	(573) 676-4435
Kayla Borden-Wheat	AA/FFD Coordinator	(573) 808-3801
Danielle Campbell	AA/FFD Coord & Fatigue	(573) 814-6317
Jenny Buesking	AA/FFD Coord & Medical	(573) 291-2584
Amy Dillon	FFD Coordinator	(636) 295-8794

FOREIGN MATERIAL EXCLUSION (FME)

FME Support	Jonathan Jones	(636) 201-9255
FME Support	Ron Rackers	(573) 310-7328

FUEL TEAM Office (573)676-4258

Trevor Gladback (D)		(843) 573-9131
Stan Adams (D)		(573) 220-2338
Caleb Hedrick (N)		(573) 808-6324
Nathan Casey (N)		(314) 210-7869

INFORMATION TECHNOLOGY (IT)/CYBER SECURITY

Help Desk - 4HELP		(314) 554-4357
Cyber Security On-Call		(573) 220-5933
Chris James	Manager, IT	(573) 823-8288
Tony Lowry	Cyber Sec. Prog Mgr.	(573) 826-0713
Kim March	Cyber Sec. Analyst III	(573) 220-8545

MAINTENANCE

Lee Young	Sr. Mngr. Mtce.	(314) 974-9544
Rob Morgan	Mgr. Electrical	(573) 220-1600
Brad Leuther	Mgr. Mtce. FIN	(573) 544-4994
Terry Becker	Mgr. I & C	(573) 659-6068
Matt Weekley	Mgr. Mechanical	(636) 358-9251
John Davis	Mgr. Mtce Svcs	(636) 234-8495

MAINTENANCE COORDINATION CENTER (MCC)	
MCC Manager	(573) 676-8261
Mechanical Maintenance	(573) 676-8262
Electrical Maintenance	(573) 676-8260
	(573) 676-8212
I&C Maintenance	(573) 676-4223
BHI	(573) 676-8287
	(573) 676-8288
Ops WPA	(573) 676-8266
General/Spare	(573) 676-4222

OPERATIONS/WORKMAN'S PROTECTION ASSURANCE (WPA)		
Brandon Long	Dir. Nuclear Operations	(636) 358-9251
Ron Cash (D)	Sched. Exec Mgr.	(573) 544-8046
Josh Copeland (N)	Sched. Exec Mgr.	(314) 479-4950
Kalip Davidson (D)	Proj Team SRO/WPA Lead	(573) 544-8521
Ali Syed (N)	Proj Team SRO/WPA Lead	(314) 532-3790
Matt Sellers	SWYD Coordinator	(573) 544-6203
Dave Crider	Shtdwn Safety Mgr.	(573) 680-9964
Leland Bland	Shtdwn Safety Mgr.	(314) 225-4606
Sarah Sachs (D)	Admin Support	(573) 826-5534
Tim Loftus (D)	Admin Support	(314) 225-1712
Chris Perry (D)	Admin Support	(573) 544-6044
Bulk Work Team		
Josh Whitten (D)		(573) 303-8514
Bryan Pearson (D)		(217) 825-7630
Greg Ellis (N)		(636) 515-9815
Hannah Henze (N)		(314)239-5503
Electrical/Major Test		
Jaeson Day (D)		(636) 579-0964
Vince Marinacci (D)		(314) 914-5162
Brendan Ryan (N)		(785) 338-0102
Nagasmitha Akkinapragada (N)		(573) 823-9402

Primary Team		
Chad Taylor (D)		(757) 472-4659
Robert Chisholm (D)		(573) 919-0223
Kyle Woelker (N)		(573) 220-0154
Dean Campbell (N)		(573) 544-3650
Secondary Team		
Mike Carr (D)		(573) 544-1569
Steven Anthony (D)		(573) 999-7037
Aaron Sander (N)		(573) 489-6369
Ed Keene (N)		(314)974-8964
WPA Team		
Ben Sturm (D)		(573) 239-7336
Matt Sellers (D)		(573) 544-6203
Jake Walker (N)		(573) 257-7503
Josh Adams (N)		(573) 544-7685

QUALITY CONTROL (QC)	
QC Contact	(573) 676-8285

RADIATION PROTECTION (RP)/ALARA		
Elijah Kissock (D)	RP Supervisor	(573) 220-6385
DuWayne Mangold (D)	RP Supervisor	(573) 826-9069
Felicity Beckfield (D)	RP Supervisor	(573) 239-4659
Aaron Enloe (N)	RP Manager	(573) 592-9286
Adam Gilliam (N)	RP Supervisor	(573) 220-8513
ALARA Office		(573) 676-8939
RB RP Contact		(573) 676-8508
AB/FB/RW RP Contact		(573) 676-8269
Dosimetry		(573) 676-8436

REACTOR ENGINEERING

Justen Vinyard (D)	(573) 544-8908
Jonathan Cordz (D)	(636) 744-3202
Brian Richardson (N)	(314) 225-1429
Kurt Linsenbardt (D)	(314) 225-4572

REACTOR SERVICES

(Includes Fuel Handling, Head Area Maintenance, and Polar Crane)

Walt Muskopf (D)	Sr. PM Reactor Services	(314) 225-1785
Andrew Burgess (N)	PM Reactor Services	(314) 225-1014
Kirt Benson (D)	Framatome Site Mgr	(479) 979-7496
Clay Nordin (N)	Framatome Lead	(479) 979-7496
Oversight Brad Agee (D)	Americans Generating Energy Excellence	(870) 476-1196

REACTOR COOLANT PUMPS (RCP)

Bo Wyatt (D)	(573) 220-4564
Christian Ackert (N)	(573) 225-1046
Dewey Stump (Framatome)	(704) 964-6565
Greg Klein	(314) 225-1046
Mike West	(573) 220-6773

SAFETY

John Roodhouse	Lead	(573) 338-3183
Chris Pfau	Lead	(314) 285-8651
Jennifer Orr, RN	Site Nurse	(337) 818-4722

SECURITY

Main Access Facility (MAF)	(573) 676-8776
Security Shift Supervisor (SSS)	(573) 676-8780
Central Alarm Station (CAS)	(573) 676-8774
Secondary Alarm Station (SAS)	(573) 676-8785
Key Issue Station	(573) 676-8839

STORES	
Issue Desk	(573) 676-8273
Receiving Dock (Stores I)	(573) 676-8441
Stores II	(573) 676-8532
Receiving Dock (Stores II)	(573) 676-4110

TOOL ROOMS	
Service Building	(573) 676-8221
Aux Building	(573) 676-4209
Ram Storage	(573) 676-4711

TRAINING	
In-Processing/Scheduling	(573) 676-8759
Greg Matherly, Director. Training	(573) 826-7086
Jeremy Czeschin, Mgr. Technical Training	(573) 592-9218
Training Clerk	(573) 676-6073

ADDITIONAL NUMBERS	
Cafeteria	(573)676-4132

HIGH IMPACT TEAMS (HIT)

Team	Sponsor	Team Lead
RCP 'D' Motor / Impeller	Jacob Kuhlenberg	Derek Riegel
LP Turbine L-0 / L-1 Blades	Terry Becker	Landon Schuder
Cranes (PC, SFP, RM, JIBS, TB)	Jacob Kuhlenberg	Ben Groner
ESW Pump House Piping Replacement	Greg Kremer	Dan Harris
Valve Team	Terry Becker	Travis Dial
Electrical BUS / Back Feed	Terry Becker	Josh Butts
'A' MDAFP Cable Replacement	Juan Cortez	Rich Nelson
H8 Sleeve & RX Vessel Head Stand	Todd Witt	Shane Steeves
GNPT 0936 XMTR Replacement	Shannon Gaydos	Zach Davidson
'A' CTMT Cooler Coil Replacement	Greg Matherly	Jeremy Czeschin
Cooling Tower Scope	Jacob Kuhlenberg	Jeff Wallendorff
Water Plan	Brandon Long	Emily Pointer
Laydown Coordinator	Terry Becker	Dale Stieferman
DA System License Renewal Inspection	Todd Witt	Shane Grotewiel

TASK TEAMS

Team	Sponsor	Team Lead
'A" Train	Billy Brown	Security
'B' Train	Billy Brown	Security
Refuel Equipment	Shannon Gaydos	Stan Adams
Condenser Bellows	Shannon Gaydos	Haley Mertgen

REFUEL WINDOWS

Window	Sponsor	Team Lead
Window 1 & 2 - Unit Offline to Mode 6	Brandon Long	Ron Cash
Window 3 & 7 – Disassembly / Assembly to Mode 5	Juan Cortez	Jon Lafoy
Window 4 & 6 - Core Off Load / Reload	Greg Matherly	Rob Shadbolt
Window 5 - Time Core Off Loaded	Jacob Kuhlenberg	Brad Leuther
Window 8 - Mode 5 to Mode 4	Brandon Long	Josh Copeland
Window 9 & 10 - Mode 4 to 98 % Power	Brandon Long	Tim Holland

Outage Control Center (OCC) Mission

Function as the central point of communications for outage management and coordination to prevent and remove barriers to the execution of CRITICAL and Near CRITICAL Path Jobs

CRITICAL PATH REQUIREMENTS FOR SUPERVISORS/ PROJECT COORDINATORS

- Inform OCC Department Manager if delays of > 30 minutes are incurred with the activity.
- Interface with support groups and preceding and succeeding work groups to ensure that:
  - Their work starts immediately after preceding work.
  - The succeeding work group is notified in advance when their work group will be able to start the next task.
- More guidance can be found in APA-ZZ-00150 Appendix D.

RISK MANAGEMENT: AN OVERVIEW

An important aspect of a refueling outage is the assessment of risk associated with work activities and the plant conditions required to support those activities. There are six key safety functions which are vital in determining what level of risk is present at any point in time. These key safety functions are as follows:

- Reactivity Control: to monitor the availability of borated water sources and flow paths to the Reactor Coolant System (RCS) that are needed to ensure the RCS boron concentration is maintained.
- Core Decay Heat Removal: to monitor the ability to remove residual heat from the reactor core when any fuel assemblies reside within the reactor vessel.
- Inventory Control: to monitor the ability to maintain enough coolant volume in the RCS to ensure that the core is always covered
- AC Power Availability: to monitor the availability of on-site and off-site power sources to run pumps and other vital equipment.

- Containment Integrity: to monitor the ability to seal the reactor building penetrations (equipment hatch, personnel hatches, and piping penetrations) from the outside atmosphere in case of a fuel handling accident or a loss of Residual Heat Removal (RHR).
- Spent Fuel Pool Decay Heat Removal: to monitor the ability to remove residual heat from the spent fuel pool.

After all the factors are reviewed, a level of risk can be determined for each safety function, which will result in one of four risk levels. An overall risk level can also be determined. These risk levels are:

RED: The plant's ability to perform safety functions is in jeopardy. The plant MUST NOT be intentionally placed in this condition (N-1).

ORANGE: The plant's ability to perform safety functions has been degraded, and steps should be taken to minimize the amount of time in this condition. The plant MUST NOT be intentionally placed in this contidtion (N).

YELLOW: The plant's ability to perform safety functions has been reduced, necessitating additional evaluation. Entry into a ***YELLOW*** condition requires increased plant awareness and management of plant risk (N+1).

GREEN: The plant is fully capable of performing all safety functions.

The philosophy at Callaway is to maximize the availability of equipment necessary to support key safety functions through the concept of Defense in Depth (N+2).

WORKMAN'S PROTECTION ASSURANCE

An essential part of your safety is Callaway's Workman's Protection Assurance (WPA). APA-ZZ-00310, *Workman's Protection Assurance*, and ODP-ZZ-00310, *WPA Local Control and Caution Tagging*, are the procedures that govern the program. Refer to these procedures and the appendices and use all applicable Human Performance Tools to ensure you can complete work safely.

Adherence to the WPA Program is one of Callaway's Rules to Live By. If you have any questions about WPA, ask your supervisor or the WPA Support Team.

WPA Coordinator	(573) 676-8881 or (573) 676-8552
WPA Supervisor	(573) 676-8134 or (573) 676-8371
WPA Desk RO	(573) 676-8816 or (573) 676-8671

- These are the Personal Protection tags used at Callaway Energy Center.

  HOLD OFF *(Red)* - Do not operate this component or remove any component from a system while this tag is attached.

  EMOR *(Red/White Striped)* - Maintenance allowed on this component – refer to APA-ZZ-00310 for specific rules.

  TD HOLD OFF *(Red/White/Yellow)* - Do not operate this component.

- The following tags have specific rules governing their use.

  LOCAL CONTROL *(Pink)* - Refer to APA-ZZ-00310 for specific rules.

- The following tags are Informational Tags, which contain information that must be reviewed/followed for the tagged components:

  WORK IN PROGRESS *(White)* - Component operation not allowed.

  TEST IN PROGRESS *(Blue)* - Component position changes allowed only as directed by work document, test, or procedure.

  CAUTION TAG *(Yellow)* - Contains caution information.

  PLANT STATUS CONTROL *(Light Blue)* - Tracks components not in their normal position that are not tracked by any other plant procedure.

RULES TO REMEMBER:

- You and your supervisor must be signed on all protection type (*Hold Off*) WPA associated with your job prior to starting or continuing work.

- If your job is associated with WPA, then you must sign on the job prior to doing work.

****You must sign off WPA before leaving site unless authorized by Operations to stay signed on****

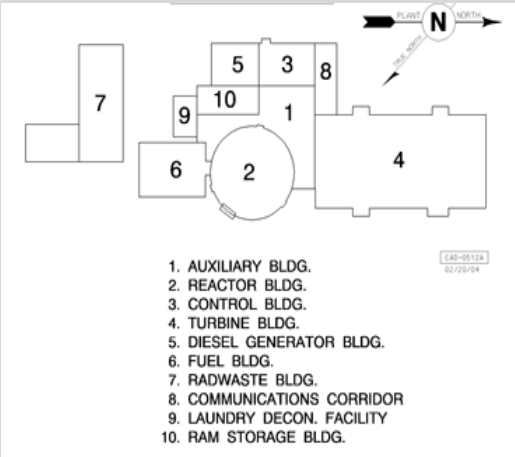
SWITCHYARD ACCESS

Access to the switchyard and control house is carefully controlled to ensure the plant's off-site power sources are not jeopardized by maintenance or other activities. Switchyard access is controlled per APA-ZZ-00322, Appendix D, *Work Control Center Organization and Operation.*

RULES TO REMEMBER:

- Contact the Work Control Center @ (573)676-8552 for access.
- Access to the switchyard is obtained by using your Corporate Ameren Badge with your Switchyard Corporate Security Pin; or by being escorted by an authorized individual.
- Vehicle access gates to the switchyard are to remain closed at all times except during authorized entry/exit.
- Vehicles must not be left unattended and running in the switchyard at any time.

POWER BLOCK



Rooms have numbers in the format "ABCD."

"A" is the building number (see above).

"B" is the level number starting from bottom with 1 being the lowest level.

"CD" is a sequential number. Unlike components, room numbers start Plant South & Plant West and go up as you move Plant North & East.

For example, room 1109 is:
1 - room is in the Aux building.
1 - room is on the lowest level of Aux building
09 - room is plant west of 1110 & north of 1108

PROTECTED EQUIPMENT

During the outage, certain equipment and/or areas will be posted as "protected" to reduce the potential of a loss of key nuclear safety function (see section RISK MANAGEMENT: AN OVERVIEW).
Work is not allowed in these areas or on / around this equipment unless specifically authorized by the Shift Manager. Additional controls including an approved form CA 2980, an integrated brief with Operations personnel and direct supervisory oversight are required.

The placards for 'A' Train equipment are red lamacoid with white lettering. The text for these signs is:

PROTECTED TRAIN EQUIPMENT
OBTAIN ACCESS AUTHORIZATION FROM
WORK CONTROL CENTER @ (573)676-8552
OR FIELD OFFICE @ (573)676-8527

The placards for 'B' Train equipment are yellow lamacoid with black lettering. The text for these signs is:

PROTECTED TRAIN EQUIPMENT
OBTAIN ACCESS AUTHORIZATION FROM
WORK CONTROL CENTER @ (573)676-8552
OR FIELD OFFICE @ (573)676-8527

The placards for Non-Train related equipment are black lamacoid with white lettering. The text for these signs is:

PROTECTED TRAIN EQUIPMENT
OBTAIN ACCESS AUTHORIZATION FROM
WORK CONTROL CENTER @ (573)676-8552
OR FIELD OFFICE @ (573)676-8527

EXPECTATIONS FOR WORK IN THE RCA

Expectations for work inside the Radiologically Controlled Area (RCA) are contained in APA-ZZ-01004, *Radiological Work Standards*. Personnel required to perform work in the RCA must comply with the requirements delineated in this procedure. This procedure contains the expectations for entry to and exit from the RCA, the Basic Radworker Expectations, use of the Personnel Contamination Monitor (PCM), dose monitoring requirements and the process for revoking and restoring access to RCA when any Radworker expectation is not met. HTP-ZZ-01203, *Radiological Area Access Control*, has a list of Radworker challenge questions you may be asked at RP Control Points. These questions will be asked to verify your understanding of RWP's. It is recommended that you complete a Basic Radworker Expectations Card (Blue Card) for any RCA entry. If you are entering the Reactor Building, you must have a Basic Radworker Expectations Card (Blue Card) with you. The Radiation Protection (RP) Technicians at Control Points may take it or let you keep it.

GENERAL WORK PRACTICES IN THE RCA

Smoking, eating, drinking, and chewing are ***prohibited*** in the RCA, except that drinking areas may be established if specifically authorized by RP personnel.

Report all leaks of systems in the RCA by completing a Job and reporting them to the Control Room or Operations personnel in the Outage Control Center (OCC). Treat all leaks as contaminated.

Treat all overhead areas greater than **seven** feet, inaccessible areas, and internal surfaces of all ventilation systems as contaminated until surveys have been completed or an evaluation has been performed by RP. RP may waive the survey based on past history or radiological conditions.

Treat all floor drains and floor penetrations as contaminated. If the grating is removed, it must be bagged. Upon completion of the job, reinstall drain grating.

Follow all RWP instructions and posting instructions in the RCA. When unsure, contact RP. Willful violation of posting instructions will not be tolerated and will result in disciplinary action up to and including discharge.

Locate the "areas to avoid" indicated by the **"Elevated Dose Rates"** signs.

Locate the **Low Dose Waiting Areas** and use them. If there is not a sign in the room or area you are working, you must exit the room/area to get to the **low dose waiting area**.

Contain all liquids in the RCA. When working on contaminated systems, ensure containments are used to minimize the spread of contamination. Contact RP about the type of containment to use.

All cords and hoses crossing the boundary to a contaminated area must be secured to minimize the possibility of the spread of contamination across the posted boundary.

Prior to any system breach in the RCA, contact RP to alert them of the breach and assess the need for an RP technician to be present. System breach includes venting and draining operations.

Report all air monitor alarms and area radiation monitor alarms to RP. Leave the area until directed otherwise.

When exiting a contaminated area, frisk hands, face, and feet if a frisker station is provided at the step-off pad. Proceed to the nearest Contamination Monitor. If an alarm sounds, repeat the count. Contact RP if a second alarm sounds.

LEVEL 2 ALARA BRIEFS - AVOID OUTAGE DELAYS

The RWP has a space labeled

"Type of Brief: *Level 2 Brief Required*"

Allow 15-30 minutes at HP Access Control (HPAC) for ALARA Briefs when required. Allow sufficient lead time for ALARA Briefs to ensure your job starts on time. Level 2 ALARA Briefs should be arranged by the work group supervisor well ahead of the scheduled job time to minimize delays at HP Access Control.

If you have any questions concerning the need for an ALARA Brief, contact RP.

Use of the Small Article Monitor (SAM)

ALL ITEMS TO BE RELEASED FROM THE RCA THAT WILL *FIT* IN THE SAM MUST BE *RELEASED* BY THE SAM.

All releases must be performed by or directed by an RP technician. The individual bringing the items(s) to be released must notify the RP technician that they have item(s) to be released and in general, what they are.

IF a technician is not present, ***THEN*** do one of the following:

- ***Call*** the RP technician, OR
- ***Tag*** the item with an In-Process Material Control Tag and ***leave*** it on the table for survey. Return later to pick it up.

IF the items to be released are personal, paperwork or belt worn items including work gloves, ***THEN*** place the items in the SAM and press the button to start the count.

IF the item(s) to be released are other than the above listed (such as liquids, grease, etc.), ***THEN*** the RP technician must evaluate the suitability of using the SAM for release. The RP technician will EITHER direct the item be placed in the SAM, OR tell the individual what must be done to release it.

DO NOT PROCEED TO THE PCM UNTIL YOUR ITEMS ARE MONITORED.

IF the SAM does not alarm, ***THEN*** the RP technician will remove the item from the monitor and the individual may proceed to the PCM for monitoring.

IF an item alarms the SAM, ***THEN*** it must be removed from the same side it went in. At that time the technician determines what must be done with the item.

TOOL AND EQUIPMENT DECONTAMINATION

Do not take tools into the RCA unless they are not available in the Tool Rooms. Once taken into the RCA, tools cannot be released unless approved by RP.

When using tools in contaminated areas:

- Wipe all tools and properly bag them before removing them from a contaminated area.
- If RP is present, request a survey.
- If RP is not present, clean bag transfer tools across the contaminated area boundary.
- Complete an In-Process Material Control Tag and attach it to the bag.
- For M&TE, also attach an M&TE tag to the bag.
- Take the item to the tool drop off table located on Aux Building – 1974' or the RSB Tool Crib.

Delays in deconning or even the loss of your item may result if an In-Process Material Control Tag is not attached to the item and completely filled out.

SPECIALTY TOOLS AND M&TE DECONTAMINATION

For decontamination of specialty tools or Measurement and Test Equipment (M&TE), contact RP Balance of Plant (BOP) personnel for

specific instructions.
They will perform the survey/decon and return the item(s) to the individual at the step-off pad/control point If further decontamination is required, bag the item and return it to the Tool Table. Provide a contact name for the item(s).

SELF READING DOSIMETER (SRD) ALARMS

If your **SRD** alarms, immediately notify your co-workers, leave the work area, and contact RP. This means one of the following, depending on your particular job situation:

- Contact the RP technician providing your job coverage, OR
- Contact the RP technician assigned to your work area (Aux Building, Radwaste Building, Reactor Building, Bioshield, etc.), OR
- Report to HP Access Control (HPAC).

Never assume the alarming **SRD** is malfunctioning.
Check your **SRD** frequently and ***leave the RCA when you reach 80% of your dose setpoint to ensure you don't receive a dose alarm***. **Check your SRD dose at least every 15 minutes.**

PROTECTIVE CLOTHING DRESSOUT AREAS

Dress-out areas are located on the 2000' elevation of the Radwaste Building and the 1974' north elevation of the Aux Building. Individuals accessing the Reactor Building should use the dress-out area on the 1974' elevation of the Aux Building.

Things to remember:

- Individuals will be required to wear their modesty garments into the RCA.
- Do not bring valuables into the RCA. Leave them in a secure place outside the RCA.
- Keep all dress-out areas clean. Return excess PCs and materials to their proper storage locations. Pick up any trash generated.

- Hard hats are required in the RCA. Individuals entering the Reactor Building should don a hood or skullcap at the dress-out area and pick up a hard hat at the Containment personnel hatch. Individuals working outside the Reactor Building should use their personal hard hats.
- Personal hard hats should be removed and replaced as part of the PC undress sequence prior to crossing the step-off pad.
- During PC undress, place items in receptacle designated for each item.
- STOP – THINK – ACT – REVIEW (STAR) – Do you have <u>your</u> **DLR** and **SRD** at all times?

FOREIGN MATERIAL EXCLUSION (FME) PROGRAM
APA-ZZ-00801 - Foreign Material Exclusion

The purpose of OUR FME Program is **PREVENTION** of foreign material intrusion into systems and components that could degrade nuclear fuel and plant equipment.

PREVENTION is accomplished through implementation of strong FME Fundamentals AND proper behaviors by ALL plant workers.

OUR Refuel 27 Goals include:

- Zero fuel failures (caused by foreign material introduced during RF27) for fuel cycle 27.
- Zero Significant FME Events (based on KPI definition) during Refuel work activities.

Expectations from the FME Coordinator:

- Work SAFELY – you are our greatest asset
- Effective implementation of FME controls relies on YOU
- Comply with guidance of FME Monitors when entering / exiting FME-1/High Risk areas
- Discuss FME controls during job briefs to assure understanding prior to performing work

- STOP – Don't proceed in the face of uncertainty – IF you are unsure, STOP and request assistance.
- Use proper housekeeping techniques to reduce potential for foreign material intrusion.
- Generate a Condition Report (CR) to document deficient or adverse conditions
- Contact the on-duty FME Coordinator to assist in resolving questions, any intrusions of FM, or concerns involving FME controls.
- Take the time necessary to DO THE JOB RIGHT THE FIRST TIME.

THINK CYBER SECURITY

NRC Cyber Security Rule Guidance for Critical Digital Asset (CDA) Portable Media and Device (PMD) Usage:

- **CDA PMD must be controlled in accordance with APA-ZZ-01108, Addendum A. This covers much more than scanning.**
- Only members of the Cyber Security Critical Group are authorized to use PMD and CDAs (Critical Digital Assets).
- Use only authorized PMD with CDAs and CDA scanning kiosk.
- Vendor laptops must not be connected to CDAs.
- Never insert a CDA USB drive or CDA PMD into any non CDA device.
- Data may only be transferred to CDA USB drives using the malware scanning kiosks data transfer function.
- Authorized USB drives, portable hard drives & keys to access authorized laptop computers are stored in the Security Key Issue Station.
- Passive media, USBs, laptops, and hard drives must be scanned before use.
- Cyber Security must perform data integrity checks before data is transferred to a CDA.
- All PMD must remain under the physical control of the designated custodian when not in the Key Issue Station.

- Cyber Security Critical Group qualification is required to remove port blocks and/or tamper seals.

When working on CDAs, follow the requirements in EDP-ZZ-01108. To determine whether a device is a CDA:

- Check the Callaway Critical Digital Asset (CDA) Identification List in the Document Room or Director.
- Check Location ID characteristics in Director or EMPRV.
- OR contact Cyber Security.

If you observe anything suspicious related to a CDA, notify Cyber Security or the Security Shift Supervisor.

Security Reminders

Security at Callaway is **everyone's** job. Security is part of our commitment to protect the health and safety of the public. At Callaway, we take this commitment very seriously both while on-line and during outages. To avoid work delays, security considerations must be factored into job planning. If you are unsure of the security requirements required for a job: STOP, contact your supervisor or the Security Department. Thank you for your cooperation helping Callaway meet our security requirements!

Important Security Reminders:

- Security is the responsibility of everyone on the plant site.
- Due to the large volume of personnel and material that requires processing into the Protected Area, please limit the amount of items that you present for processing through the Main Access Facility (MAF). This will expedite the process for you and our co-workers. ***Remember, any item brought into the Protected Area is subject to search***.
- Ensure to follow all directions from Security Force Personnel.

- Ensure Security is notified of any work that may affect normal access routes, block gates/doors, breach fencing, requires security doors or barriers to be open, or lay down of materials that substantially block yard visibility.
- Badges must be worn at all times on a lanyard, facing out, between the waist and the neck, and on the outside of any outer garment. If job conditions prevent this, please refer to APA-ZZ-01105, Site Access or contact Security for an appropriate alternative.
- Report lost badges to Security **immediately** at (573)676-8774.
- Ensure doors are properly closed and secure after use.
- Where applicable, ensure you push the "Exit Button" before exiting card reader doors.
- When escorting, ensure you maintain visual contact of your visitor(s) at all times.
- Do not escort more than five visitors at a time.
- To prevent inadvertent "tailgating," ensure the green light illuminates on the card reader for **your** badge before entering any access control area.
- If you operate a vehicle inside the protected area, ensure ignition keys are not left unattended in the vehicle. Lanyards must be used to connect keys to your person when entering, driving and exiting the vehicle. Approved lanyards are available from Security.
- If a security door will not open, contact CAS/SAS at (573)676-8774 or (573)676-8785.
- For other questions, contact Security CAS/SAS at (573)676-8774 or (573)676-8785.

NOTES

PHONETIC ALPHABET

A	Alpha	N	November
B	Bravo	O	Oscar
C	Charlie	P	Papa
D	Delta	Q	Quebec
E	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	T	Tango
H	Hotel	U	Uniform
I	India	V	Victor
J	Juliet	W	Whiskey
K	Kilo	X	X-ray
L	Lima	Y	Yankee
M	Mike	Z	Zulu

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