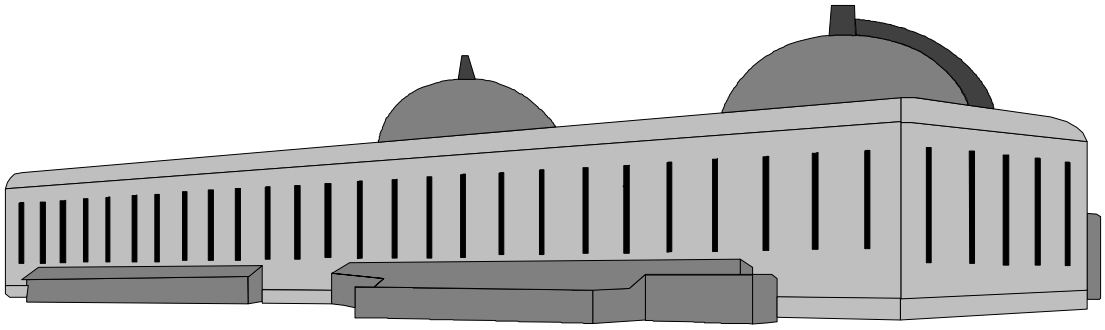
NPG LEARNING SERVICES

General Employee Training



PROTECTED AREA ACCESS

Rev. 21, May 2009

Notes:

This Handout is intended to supplement training normally performed on computer-based training (CBT). It lists the Protected Area (PA) Access training requirements by topic areas, as does CBT.

Each topic area has objectives listed, these objectives are knowledges considered important to obtaining unescorted PA access. Objectives also form the basis of our test questions.

Objectives are broken down into two types: generic (common to most nuclear plants) and site specific (unique to Diablo Canyon). The site-specific objectives are clearly indicated by both bolding the objective text and also stating ***(Site Specific)*** immediately after listing the sequential objective number.

For those with prior nuclear experience from other plants, it is recommended that you spend most of your time looking at the site-specific objectives.

TABLE OF CONTENTS **PAGE**

STATION INTRODUCTION AND ORGANIZATION

OBJECTIVE #1, (*Site Specific)*

Given a drawing of the site, identify locations of major plant buildings.

INTRODUCTION

To the new employee, finding your way around can be difficult. Taking a few moments to study a site map may prove very helpful.

NEED TO KNOW

Outside the protected area important buildings include:

- The training center consisting of the simulator building and the maintenance shops building.
- The Fitness For Duty administration and processing facility.
- The Intake Structure where the main circulating water pumps are housed.
- The security building which serves as the entry point into the protected area.

Inside the protected area we have:

- The administration building which houses management offices, computer services, document services, the cafeteria, and the NRC resident offices.
- The “power block”, which consists of the two reactor containment buildings, auxiliary building, turbine building, and the fuel handling buildings. These buildings contain the reactor vessel, steam generators, reactor coolant pumps, pressurizer, turbine, and condensers.
- The containments and auxiliary building house most of the components for the primary or “hot” systems.
- The turbine building contains most of the secondary or “clean” systems.
- The main warehouse up on the hill.

PROTECTED AREA ACCESS AT DIABLO CANYON NUCLEAR POWER PLANT

1. Construction Offices
2. U-1 Containment
3. U-2 Containment
4. Shooting Range
5. Power Block/Auxiliary Bldg. (Bldg. 101)
6. I&C/T-Com/Medical Facility (Bldg. 102)
7. Discharge Structure
8. Administration Building (Bldg. 104)
9. Security Building (Bldg. 105)
10. Intake Structure (Bldg. 108)
11. Simulator Training Building (Bldg. 109)
12. Turbine Generator Equip Whse (Bldg. 111)
13. DCPP Whse B (Bldg. 113)
14. DCPP Main Whse (Bldg. 115)
15. Unit 2 Cold Machine Shop (Bldg. 116)
16. Laundry and Radwaste Building (Bldg. 117)
17. Auxiliary Boiler Enclosure
18. Maint Shop Training Bldg (Bldg. 119)
19. Construction Fabrication Shop (Bldg. 122)
20. Haz Mat Whse (Bldg. 127)
21. Gas Cylinder Storage (Bldg. 130)
22. TES Biology Lab (Bldg. 160)
23. FFD Facility (Bldg. 162)
24. TES Oceanography Lab
25. Building Mechanic Shop
26. DCPP Whse A (Bldg. 519)
27. DCPP Haz Waste Handling Facility
28. Construction Blast & Paint Facility
29. Turbine Building (Bldg. 101)
30. Exercise Trailer
31. Vehicle Inspection Station

XX Permanent RCA
==

OBJECTIVE #2, (*Site Specific)*

State the appropriate use for each communication system at DCPP.

INTRODUCTION

Diablo Canyon has several systems of communications. Being familiar with them will prove very helpful.

NEED TO KNOW

EMERGENCIES are reported to the Control Room by calling 779 on any plant phone.

The plant public address system is not available for general paging. It's used by the control room and a few authorized personnel for making emergency announcements and other designated purposes.

The plant telephone system is the normal means of communicating with employees that have an office. Most telephones have voice mail and most have the ability to page the person when you leave an urgent message.

Personal pagers are the most common means of reaching employees that do not have a desk or office. To use the paging system, dial 4666 and listen for a long beep, then dial the pager number desired. After three quick beeps, dial the number you are calling from plus the pound (#) key and hang up (you will hear a busy signal after pressing the pound key). Nearly all PG&E employees have a pager and many contractors also have one.

E-mail can be used to send non-urgent messages. All PG&E and many contract personnel at DCPP have e-mail accounts. The address is the worker's 4 letter/number ID @pge.com

Several radio systems are used at DCPP. Security has their own radio system, and other radios are available for use by other departments when necessary.

EXAMPLES

In an emergency, when someone cannot be reached by any other means, you can ask an authorized individual to access the plant public address system.

When using the plant phone system, all calls are to be kept as brief as possible and any calls that involve a toll charge must be charged to the employee's personal credit card or home telephone number.

OBJECTIVE #3

Describe the basic process used to produce electricity at a nuclear facility.

INTRODUCTION

To understand this process, we need to look at how nuclear energy is converted to electricity.

NEED TO KNOW

Energy is produced from the nuclear fission process that takes place in the reactor. When a uranium atom undergoes fission (splits into two atoms), energy is released in the form of heat. The heat is used to boil water and produce steam. This steam is used to turn a turbine just like in a coal, gas, or oil power plant. The turbine is connected to the generator which produces the electricity PG&E supplies to customers.

HELP

The only major difference between a nuclear powered electrical generating plant and a coal or gas-fired electrical generating plant is the source of the heat that boils the water in order to make the steam.

OBJECTIVE #4

State the function of each major plant section.

INTRODUCTION

Knowing the function of each work section will enhance communication and expedite work that crosses section lines.

NEED TO KNOW

The function of the Operations Section is to operate the plant by:

- Controlling reactor power.
- Staffing the control room.
- Controlling pumps, valves, and other equipment away from the control room.
- Placing clearance tags on equipment.
- Approving plant maintenance work.

The Maintenance Section performs preventative maintenance, repairs, and performs upgrades to:

- Motors.
- Pumps.
- Valves.
- Plant instruments.
- Security equipment.

The Radiation Protection Section assists the plant workers in minimizing radiological exposure and the spread of radioactive contamination. They perform activities such as:

- Escorting personnel into high-radiation areas.
- Measuring plant radiation levels throughout the plant.
- Controlling the access to the RCA
- Controlling work in radiation, high radiation, and contaminated areas.
- Preparing Radiation Work Permits.

NEED TO KNOW (CONT.)

The Learning Services Section develops training material for all plant personnel. They present the training courses and maintain training records.

The Security Section protects the plant from internal and external threats. Controlling access to the company property, the protected area, and controlling security doors within the plant are all part of the Security Section responsibilities.

Our Nuclear Quality Verification Section ensures the quality level of the plant is as high as possible. They perform activities such as monitoring work to ensure it is done correctly and performing reviews to ensure programs comply with plant procedures and state and federal requirements.

The Emergency Planning Section prepares plans to deal with any emergency that occurs on site and conducts drills to ensure the plans are adequate and plant personnel are prepared to respond to a plant emergency. The purpose of the EP section is to protect the health and safety of the general public.

The Emergency/Safety Services Section provides oversight of the industrial safety program. They may become involved with activities such as:

- Checking air quality.
- Evaluating industrial accidents.
- Evaluating heat stress concerns.

They ensure compliance with all federal Occupational Safety and Health Administration (FED-OSHA) and California Occupational Safety and Health Administration (CAL-OSHA) regulations.

OBJECTIVE #5

State company policy regarding Configuration control, procedural compliance, and the use of controlled documents.

INTRODUCTION

Most of our administrative procedures are derived from Nuclear Regulatory Commission (NRC), INPO, Cal-OSHA, and other state and federal agency requirements. Procedures ensure that a job is performed consistently, in a quality manner, and in a logical sequence.

NEED TO KNOW

Configuration Control is a term that means the plant valves, electrical breakers, and other equipment must be in a certain condition or status at all times.

Only manipulate plant components per approved work documents or procedures.

Immediately notify Operations if:

- Equipment configuration is different than expected.
- A question exists on what position a component should be left in.
- A component is inadvertently mis-positioned.
- Barriers are discovered degraded.

Do not attach scaffolds or ladders to sensitive or safety-related equipment without proper authorization.

Do not step or climb on snubbers, pipe hangers, insulation, copper piping, hoses, tubing, instrument racks, conduit, or cables, without prior authorization from your supervisor.

Use care transiting around to prevent unintentional mispositioning. If a "bump" of plant equipment may have led to repositioning, immediately contact the Work Control Shift Foreman at 3600 or Shift Manager at 3377.

Approved documents include procedures, maintenance work packages, plant modification packages, radiation work permits, and others. All work at the plant is to be performed in accordance with the most current, and approved work document.

If, for any reason, you have questions about how to proceed with your task as it relates to the approved document:

- Stop the work and place the job in a safe condition.
- Contact your supervisor and resolve the problem.

Through review of the approved document, tailboards, walk-downs and other pre-job and on-the-job instructions, personnel are to be comfortable with the procedure before starting work and are expected to request assistance when problems are identified.

Only the latest, approved revision of the document (procedure, drawing, manual, etc.) is to be used to perform the work.

HELP

Personnel are expected to be familiar with the procedure before starting work through review of the approved document, tailboards, walk-downs and other pre-job and on-the-job instructions. You are expected to request assistance if you encounter a problem.

Administrative procedures may be accessed through DCPP computer system (EDMS), plant libraries (Vol. 1 Plant Manual), or through Document Services at ext. 4466 (Micro-film). Your supervisor can get these documents for you if you don't have a DCPP computer account.

Administrative procedures are named according to how large a group of workers they affect:

Program Directives (PD) - company wide

Inter-departmental (IDAP) - more than one department

Departmental-level (DLAP) - one department

Work Procedures and Instructions - individuals

If we have a company wide directive written on the subject of Operation and Management and then an Inter-departmental procedure written from that directive it would be numbered, for example, OM1.ID2 where the 1 equals the first directive on the subject and the 2 equals the second IDAP from that directive.

Prior to signing a document employees must have a sufficient understanding of and agree with the conclusions of the document. Signatures are a means of indicating authenticity and accuracy of plant documents, providing document and work traceability, demonstrating an assumption of responsibility for work performed,

and are necessary as the document may be part of the legal records of the plant

EXAMPLES

You are assigned to replace the packing in a valve. When you have disassembled the valve you notice the stem is heavily scarred. Your procedure or work package was written only for replacing the valve packing. You cannot exceed the scope of the approved work document; you must stop and contact your supervisor for direction.

OBJECTIVE #6, (*Site Specific)*

Define the terms "shall", "should", and "may" when used in procedures.

INTRODUCTION

Administrative procedures contain key words which denote requirements, recommendations, or permission. Since procedures are legal documents, these key words could have legal ramifications for each employee.

NEED TO KNOW

Shall – is used to denote a requirement.

Should - Is used to denote a management expectation and the company's expectation.

May - Is used to denote an acceptable means of performing the task.

EXAMPLES

Shall - This is a statement by the company that this step is required to be accomplished in this particular way. Failure to comply with a "Shall" in a procedure requires that a Notification be initiated.

Should - A "Should" method is the Nuclear Power Generation (NPG) preference. Foremen must have justification for not complying with a should statement.

May - The use of the word "May" denotes permission. It is neither a requirement nor an expectation.

OBJECTIVE #7

Identify the steps involved with "self-checking", and state when self-checking is required.

INTRODUCTION

Some activities are so simple, so frequently performed, or have such inconsequential results when performed incorrectly that they don't deserve any effort to avoid error. Few activities in a nuclear power plant fall in this category though.

At DCPP you need to execute your tasks as accurately as possible, so you must come to the task focused and sure of your moves.

NEED TO KNOW

Self-checking is a process that is used anytime a task is about to be performed. It ensures the correct action is being taken on the correct component.

STEPS INVOLVED WITH SELF-CHECKING

1) The simplest method most often used in the nuclear industry is S-T-A-R.

- ♦ Stop. Pause and think before beginning.
- ♦ Think. Think about what you are about to perform and on what component and in what unit
- ♦ Act. Perform the action carefully.
- ♦ Review. Observe and verify the response was correct for the action taken.

HELP

There are other methods we use to help reduce human errors. Practice our three "Key Human Performance Error Reduction Behaviors" that significantly contribute to our success:

- ◊ Three-way communications
- ◊ Self-verification (including the "two-minute rule" below)
- ◊ Effective tailboards

Two minute rule means taking a good two minutes or more when first arriving at a jobsite to ensure you are re-focused and verifying you are on the correct unit, correct component, have all the tools, etc., you look around for any potential problems or safety hazards, and lastly make yourself aware of the nearest telephone and safety equipment.

OBJECTIVE #8, (*Site Specific)*

State Your Responsibilities In Accordance With Company Policy Regarding:

- **Smoking on company property.**
- **Non-work related reading materials.**
- **Complying with RP and Security instructions.**
- **station cleanliness and housekeeping.**
- **Consequences of vandalism, tampering, or sabotage.**

INTRODUCTION

The following general policies have are standard practice in California but need to be formally stated as a matter of record.

NEED TO KNOW

Most buildings do NOT have smoking areas. Smoking is allowed outdoors unless otherwise posted. Matches, cigarettes, cigars, etc. must extinguished and be placed in the proper disposal container.

With exception of breaks and lunch periods, non-work related reading material will not be read on company property. Reading materials brought on site shall not violate the PG&E "Guidelines on a harassment free work place."

Complying with instructions from Radiation Protection personnel regarding radiological controls and with Security personnel regarding plant security controls is expected of each employee.

Vandalism, tampering, and sabotage, for any reason, are illegal at DCPP under federal law. Penalties are up to $10,000 fine and life imprisonment and also include loss of access to all nuclear plants. Report any suspicious activity immediately to security personnel.

NEED TO KNOW (continued)

All employees are expected to keep the work area clean and orderly. The goal is to leave the work area cleaner than it was found.

DCPP has designated housekeeping zones and areas that incorporate standards of cleanliness. Some of these areas are self-monitored for compliance, and some have personnel assigned for enforcement of these standards. Obey all housekeeping postings and follow all Foreign Material Exclusion (FME) procedures. DCPP housekeeping zones are:

- Housekeeping Zone 1 - Clean rooms (extreme cleanliness controls, personnel access logs, controlled access, changing into clean outer clothes and using shoe covers, etc.)
- Housekeeping Zone 2 - Equipment disassembly / reassembly (requires controlled access)
- Housekeeping Zone 3 – Similar to Zone 2 (set up to prevent contaminating equipment during disassembly / reassembly)
- Housekeeping Zone 4 - General Cleanliness (No Eating, Smoking, or Drinking).
- Housekeeping Zone 5 - Housekeeping Zone 5 areas are construction areas requiring good construction site housekeeping practices.

HELP

"No smoking" and "designated smoking area" signs are to be posted only by General Services Section. Designated indoor smoking areas must have operating exhaust ventilation.

EXAMPLES

Personnel working in the Control Room, Central Alarm Station, Secondary Alarm Station or other "on watch" locations need a relief so they can go outside to smoke. (Reliefs may not be available during all shifts).

If a housekeeping problem is discovered that you cannot resolve, just contact your supervisor.

OBJECTIVE #9, (*Site Specific)*

State the rules regarding animals on site.

NEED TO KNOW

No pets are allowed on site.

San Luis Obispo County has been designated a potentially dangerous rabies area by state authorities. The County Health Department has issued an official warning to this effect. Any possibility of rabies must be taken seriously; therefore the following rules must be observed:

- Voluntary contact with wild animals on the plant site is not allowed.
- Food may not be set out to feed wild animals. Use caution: Avoid leaving food scraps that would serve the same purpose as intentionally feeding the animals.

OBJECTIVE #10, (*Site Specific)*

State the rules and policies regarding sexual harassment.

NEED TO KNOW

It is the policy of PG&E to provide an environment free from sexual harassment. It is against company policy for any employee, male or female, to sexually harass any employee or contractor by:

1. Making unwelcome sexual advances or requests for sexual favors, or other verbal or physical conduct of a sexual nature, a term or condition of an employee's employment.
2. Making submission to, or rejection of, such conduct the basis for employment decisions affecting the employee.
3. Interfering with an employee's work performance or creating an intimidating, hostile or offensive work place by such conduct.

Sexual harassment refers to behavior of a sexual nature that is not welcome. Sexual harassment may take many forms, one being the demand for sexual favors. Other forms include:

1. Verbal – Jokes of a sexual nature, sexual innuendoes, propositions, comments and threats.
2. Non-Verbal – Sexually suggestive objects, such as strippers or belly dancers. Sexually oriented materials, including posters, calendars, and pictures. These are not allowed on PG&E property or at any event sponsored by PG&E. Non-verbal harassment includes graphic commentaries, suggestive or insulting sounds, leering, whistling or obscene gestures.
3. Physical – Unwanted physical contact, including touching, pinching, body brushing, coerced sexual intercourse, assault.

NEED TO KNOW (continued)

Sexual harassment may be subtle or overt. Whatever form it takes, verbal, non-verbal, or physical, sexual harassment can be demeaning and insulting to the recipient and will not be tolerated in the workplace.

Appropriate positive disciplinary action will be taken against any employee who violates PG&E's policy on sexual harassment. Based on the offense, the action may include, but not be limited to, an oral or written reminder, demotion, suspension, decision-making leave or termination.

OBJECTIVE #11, (*Site Specific)*

State PG&E's policies with regards to equal opportunity in the workplace.

NEED TO KNOW

It is PG&E's policy to provide equal opportunity in employment, development and advancement for all qualified persons without regard to race, color, religion, age, sex, national origin, ancestry, physical or mental disability, medical condition, including cancer-related, veteran status, marital status, sexual orientation, or any other non-job related factor. Also, it is PG&E's policy to provide reasonable accommodation for qualified individuals with disabilities to successfully perform the essential functions of their jobs. This policy applies to every aspect of employment, advancement, transfer, demotion, layoff, termination, benefits, training, compensation and working conditions. It is actively implemented throughout every PG&E facility.

HELP

As a federal contractor, PG&E has three kinds of affirmative action plans:

1. Minority and women
2. Disabled and Vietnam-era veterans
3. Individuals with disabilities

Any employee may review elements of the Affirmative Action Plans in local Human Resources offices. If you feel you are a disabled veteran, Vietnam-era veteran or an individual with a disability, you are invited to participate in the affirmative action plan and to self-identify by contacting your Human Resources office. This information will be kept confidential. Qualified employees with disabilities may request reasonable accommodation by contacting their immediate supervisor or the local Human Resources office.

SECURITY

OBJECTIVE #1

Identify The Three Purposes Of The DCPP Security Program.

INTRODUCTION

The NRC requires all nuclear facilities to have a security program.

We are all affected by the security program at DCPP and need to understand the program exists not as an obstacle, but as a benefit to a safe and secure work environment.

NEED TO KNOW

Federal regulations (10CFR73.55) requires PG&E to establish and maintain an on-site physical protection system in order to:

- protect plant personnel
- prevent radiological sabotage
- guard against theft of nuclear material

EXAMPLES

Protecting plant personnel from physical harm should a terrorist attack occur, or if an employee becomes violent.

Preventing radiological sabotage by intruders (or employees) that would endanger the employees, plant or the public.

Even though we do not have weapons grade material on site, i.e. bomb material, we are required to prevent the theft of nuclear material to protect the safety of the public.

OBJECTIVE #2

Identify The Three Types of Security Areas At DCPP.

INTRODUCTION

Each security area at DCPP requires a specific security clearance or access level for entry.

NEED TO KNOW

There are three types of security areas at DCPP.

- Owner Controlled: Per Security commitments, the Owner Controlled Area is defined as the roads within the "site boundary" as described in the Updated FSAR. The owner controlled area can be thought of as all the PG&E property around the plant, starting at the Avila Beach gate.
- Protected Area: There are two separate Protected Areas (PA). The main plant PA includes the two containments, the auxiliary, fuel handling, and turbine buildings, the administration building, security building and warehouse up on the hill. The other PA encompasses the lower elevations of the intake structure down by the ocean, where the plant's seawater pumps are located. A keycard, which signifies the proper clearance, is required for entry into a PA.
- Vital Areas: Specific areas located within the PA that contain equipment and systems which are important to the safe operation or shutdown of the plant. The proper access level on the keycard is required for entry.

EXAMPLES

Main Plant PA includes the security building, laundry and radwaste buildings, Unit 2 cold machine shop, and turbine building.

Vital area examples: The control room, the two containments, the spent fuel pool. The Auxiliary Sea Water pump area at the Intake Structure is also considered a VA.

OBJECTIVE #3 (*Site Specific)*

State The Types And Purposes Of The Keycards Used At DCPP, How They Are Worn, And What Action To Take If They Are Lost.

INTRODUCTION

Security regulations require that only authorized personnel be admitted to the PAs and VAs of the plant. Therefore, keycards are important as a means of identifying who is or who is not authorized to be in these areas.

NEED TO KNOW

The Diablo Canyon keycard has your picture on the front and social security number barcoded (not printed) on the back. PG&E personnel have a solid green background color above their picture whereas contractor keycards have green & white (diagonally) colors above their picture.

In addition to the visitor badge issued at Avila Gate, visitors have a red and white striped ID badge. It has no photo, but it does include the name of the visitor.

Keycards are to be worn at all times when you are on site. You are required to wear your keycard on the lanyard furnished by PG&E. Lanyards are available at the Access office in building 119 and in the security building, at the PA entrance.

The keycard has two purposes:

- Identification - Your picture should accurately represent your current appearance. For example, if you wear a beard, your picture should reflect that same beard.
- Access level - Your keycard allows the security computer system to verify your access level and log your location in the plant.

Anyone losing a keycard should not search for it. Immediately notify security at extension 3330 and wait for a security officer to arrive.

If you discover that you have lost your keycard (or site badge for non-keycarded personnel), even off site, call security immediately at extension 3330 (or 805 545-3330).

HELP

Immediate notification of a lost keycard may prevent having to report a security violation to the NRC.

If you see someone on site without a keycard (or a site/visitor badge outside the PA), ask that person to accompany you to the nearest phone and call security. If possible, stay with the person until a security officer arrives.

Security will deactivate a keycard upon notification that it is lost, or stolen. This prevents anyone else from using that keycard.

OBJECTIVE #4 (*Site Specific)*

Describe The Procedure For Entering And Exiting The PA.

INTRODUCTION

All employees with unescorted access must pass through a contraband detection system known as a search train. There are two search trains: One in the security building providing access to the main plant and the other at the intake structure.

NEED TO KNOW

The security search train contains three separate detectors: An explosives detector, a metal detector, and an x-ray machine.

Processing through the explosive detectors is as follows:

- Step into the detector when you hear the recorded message to "ENTER."
- A recorded message “Air Puffers On” followed by four quick blasts of air from within the detector.
- Another recorded message will state "Wait For Green Light," which is approximately 15 seconds.
- Remain still until you hear the recorded message “Exit” and the indicator lights on each side of the detector change from red to green, then step out of the detector.
- If you receive a second alarm, a pat search will be required before entry is granted.

Place any key rings, large amounts of change, any large metal objects, or anything you are hand carrying onto to the conveyor belt of the x-ray machine, and proceed through the metal detector. Allow about three seconds between you and the person ahead of you before processing through the metal detector. Failure to do so increases the chances of an alarm. Simply walk through the metal detector (no need to pause), then proceed to the other end of the x-ray machine to pick up your belongings. If the person ahead of you caused a metal alarm, wait for that person come back through the detector before proceeding.

If you alarm the metal detector, you will be asked to try again after checking for any additional metal objects. You will be asked to repeat this process until all metal alarms have been resolved. If metal alarms cannot be resolved, a pat search with a hand held metal detector will be conducted. Anything passing through the x-ray machine that is unidentifiable will require opening for a visual search.

NEED TO KNOW (CONT.)

Access into the PA is controlled by keycard reader and hand scanning units. Your hand geometry must be scanned the first time you use your keycard to enter the PA. Security personnel will assist you in enrolling your hand geometry, either at the Access Office or in the security building. You must have a government issued picture ID with you, such as a driver's license, for this step.

To enter the PA you must process through a card reader and a hand geometry reader by following these steps:

1. Verify the red light on the card reader is flashing slowly (this indicates the reader is operable and ready to process a card).
2. Present your keycard to the card reader by holding it steady within two to three inches from the face of the reader.
3. Wait until the position lights on the hand reader illuminate and the display window reads, "place hand.", then put your hand on the platen against the metal stop pegs.
4. If you have placed your hand properly, the lights on the position diagram will go out. The display window should read "ID VERIFIED". You will see a GREEN light on the CARD READER and hear a click. This means the security computer has unlocked the turnstile.
5. Enter and push the turnstile forward; it will automatically stop once you are through.

The turnstile has a point of no return at mid-cycle. Once past this point you are committed to the full cycle. Prior to reaching the mid-point, you may back out into the search area. Contact security to correct your card accountability if you received a green light and did not enter the Protected Area.

A RED light on the HAND READER indicates an unsuccessful hand read, or it indicates the security computer will not allow entry. If the hand read is unsuccessful, follow the directions on the display window. Possible problems include: a coat or shirt sleeve extending too far down the wrist, an injury to the hand or bandage on the hand. If pulling your sleeve up does not correct the problem, contact security for assistance.

After passing through the search train and exiting the security building, obtain your thermoluminescent dosimeter (TLD) from the slot with your keycard number from the Administration Building Annex, if you need Radiological Controls Area (RCA) access. Use the 2 Minute Rule to verify you have the correct TLD by checking for your name on the TLD label. It is your responsibility to verify you have your own TLD for RCA access.

GETTING ACCESS TO THE INTAKE AREA

The procedure for entering the Intake PA is much the same as entering the Main Plant PA.

Present you keycard to the officer at the intake. Process through the search train and the hand reader, and the officer will return your keycard to you after you pass through the security door.

Exiting the main plant PA:

Leave your TLD in the slot that corresponds to your keycard number at the administration building annex.

Exiting the PA requires processing your keycard through an exit turnstiles. You need to see a flashing red light before you present your keycard within 2 to 3 inches of the card reader. You should then see a flashing green proceed light and hear a click. Push the turnstile forward to enter the security building.

Proceed through the portal monitor as follows,

- ◊ The portal monitor will have a green light illuminated.
- ◊ Step into the portal monitor and pause.
- ◊ Observe the lights on the panel to your right. The green (ready) light on the right side will change to yellow, which means the machine is counting.
- ◊ When you hear a chime, and the yellow light goes out, the count is finished and you can exit.
- ◊ If a red light is observed along with an alarm, step back and repeat the process. Treat all portal monitor alarms as real!
- ◊ If you receive a second alarm, contact Radiation Protection (RP) at Ext. 3247, and then just stand aside until RP arrives. The phone is on the wall near the portal monitor in the security building.

After passing the portal monitor proceed through the second set of turnstiles.

Important note: If your employment is being terminated (i.e., the last time you will need your keycard), deposit your keycard in the "Last Day Drop Box". This clearly marked drop box is in a small hallway just to the left of the second set of exit turnstiles when leaving the Security building.

Another important note: When you scan your keycard at the PA entry and exit turnstiles- YOU MUST PASS THROUGH the turnstile. Unlike other card-controlled doors, you are not permitted to change your mind about processing through.

HELP

Please note: Keep the number of items to be passed through the search train to a minimum.

Also, it is the policy of Security Services to require personnel to energize electrical equipment brought through the search train. This includes lap top computers, monitoring devices, and large flashlights. Smaller items such as pagers need not be activated.

EXAMPLES

Some things SHOULD NOT be put in the x-ray machine. If you are a radiation worker, don't pass your TLD through the x-ray machine, just keep it on your person. If you accidentally pass your TLD through the x-ray, contact RP immediately upon clearing the search train.

OBJECTIVE #5 (*Site Specific)*

Describe The Procedure For Entering And Exiting Security Doors And Turnstiles Within The PA.

INTRODUCTION

To enter a cardreader controlled door you must have the proper access status, operate the cardreader correctly and adhere to all pertinent procedures.

NEED TO KNOW

To enter a security door:

1. Stand in front of the card reader and verify the red light is flashing slowly.
2. Present your keycard to the reader by holding it steady within two to three inches from the face of the reader.

   You will hear a quick chirp when the reader "reads" the keycard, followed quickly by a short then long chirp and a flashing green light on the reader.

   NOTE: You must see a flashing red light prior to presenting your card or you will not be properly logged into the area.
3. Proceed through the door.

   You will see a flashing green light and hear a click or buzz, which indicates the security computer has unlocked the door. Simply push or pull the door open without turning the doorknob.

   If access is refused, you will get a short chirp when the card reader "reads" the keycard followed quickly by three long chirps and a solid red light. If refused access (i.e., you receive a solid red light), do not proceed through the door. Stop and call security at extension 3193.

Security Doors

DO NOT use the doorknob to open or close the door. Allow the door to close on its own; all plant doors have hydraulic closers, which will automatically close the door. Please do not help push or pull doors closed. After going through the door, unless others are coming through after you, allow the door to fully close on its own, then challenge the door (i.e. push or pull on it to ensure it is latched and secured).

If a door is not fully latched and secured, after 10 seconds there will be a series of audible chirps. This chirping will last approximately 10 seconds. This sound indicates that the door is NOT completely secured. If you do not properly close the door before the 10 seconds elapse, security will receive a door alarm at that location.

During emergencies, keycard doors have an important safety feature that allows emergency exits without using your keycard by simply turning the doorknob. Once you get to a safe place, call security immediately, as turning the doorknob initiates a security alarm.

Operational Change

A major change to how the new system operates is that it does NOT log you through a door if the door was not opened. However, your keycard will be logged through if the door was opened by the person preceding you and was still open when your keycard was read, or if a person going the opposite direction through the door opens it while you still have a flashing green light.

Therefore, to prevent inadvertent security violations the DCPP policy is: if you use your keycard on a security door and get a flashing green light, you must pass through that door.

Review

Before a keycard reader is used, it should display a slowly blinking red light to show it is activated and working properly.

If you get a flashing green light, you must pass through the door. If you get a solid red light, do NOT pass through the door. Call security at extension 3193.

Doors will now chirp for 10 seconds if they have not been properly closed.

HELP

Computer controlled security doors are there to:

- Provide accountability in emergencies.
- Keep access records in case sabotage is discovered.
- Fulfill federal requirements.

Inside the PA, along the inside of the chain link fence are white lines painted on the pavement. These white lines indicate an isolation zone watched over by microwave, cameras, motion detectors and security officers. Do not enter these zones.

If you need to hold a security door open for an extended time for some operational need such as loading material through the door, please call extension 3193 for security assistance.

Ensuring that plant doors close behind you is vital for several reasons:

- Leaving a security door open compromises the integrity of the security system and is an NRC reportable event.
- If a fire door is not closed we are in violation of technical specifications - a serious violation as well as a dangerous one.
- Plant doors play an integral role in plant ventilation, and could play a large part in plant operations or in emergencies.

EXAMPLES

Call security at extension 3193 if you get a red light when trying to enter a door, if you keycard in but don't go through the door, or have any other problem with a security door.

OBJECTIVE #6 (*Site Specific)*

Explain Escort Responsibilities, Including The Procedure For Transferring Escorts, And Actions When An Unescorted Visitor Is Encountered.

INTRODUCTION

On occasion you might be asked to escort visitors into the plant. Escorts are fully responsible for the conduct of the visitors while in the PA.

NEED TO KNOW

Maintain POSITIVE control over the visitors by keeping them within eyesight and speaking distance the entire time that you are in the PA, including the administration building.

You, as the escort, will assist the visitors through the search train. After processing through the search train, tell the security officer at the turnstiles that you have a visitor to escort into the PA. The officer will assist you. Do not use your keycard to process them through yourself.

When going through a security door within the PA, you simply process your (the escort) keycard and lead your visitors through the door. The visitor's keycard is not used inside the PA.

EXITING THE PA When it is time to leave the PA via the security exit portal, the visitors will use their keycard to exit the turnstile going through the turnstile **ahead of you**. Once through the first turnstile and radiation monitor, drop off the escort paperwork and the visitor's keycard in the designated return slot and see the visitors through the exit turnstiles. Once they pass through the exit turnstiles, they are out of the PA and no longer need escorting.

A person may escort up to 10 people in PAs, but only up to 5 people in vital areas.

NEED TO KNOW (CONT.)

To transfer escort responsibilities, another keycarded individual simply signs and take custody of the escort paperwork. This now makes that person responsible for the visitor.

If you encounter a visitor without an escort, ask the visitor to accompany you to the nearest phone and call security at extension 3330. Stay with the visitor until security arrives.

HELP

Personnel who need to be escorted will normally meet their escort at the security information counter in the security building. There, the escort must receive either a VISITOR CLEARANCE REQUEST, for groups of visitors that will not be separated while in the PA, or a VISITOR ACCESS CARD, for individual visitors. These forms contain personal information on each person being escorted. Each visitor will receive a red and white striped visitor's keycard. The visitor's keycard will only be used to exit the PA.

The reason that 10 people can be escorted into PAs, but only 5 in vital, is due to the more sensitive equipment in the VAs which are important to plant safety.

EXAMPLES

Positive control of visitors is to be maintained at all times.

If there is no security officer visible at the turnstiles, use the intercom located by the door west of the turnstiles to contact security.

OBJECTIVE #7

Define Tailgating And Explain Why It Is Not Allowed.

INTRODUCTION

Entering PAs or VAs at DCPP without authorization is not only against NRC regulations and company policy, but it is also an unsafe practice.

NEED TO KNOW

Entering a keycard reader controlled door on someone else's flashing green light is what we call tailgating. Tailgating bypasses the security controls put in place to ensure entry by authorized personnel only and it prevents an accurate accounting of personnel during an emergency.

If you observe personnel entering a keycard controlled door improperly, please assist them in the correct process or report it to security at extension 3193.

HELP

If you enter a keycard door improperly, the next cardreader you use may show a solid red light. Anytime you receive a solid red light, stop and call security.

EXAMPLES

Holding the door open to assist others may cause them to rush and thereby enter improperly.

Making sure you get the flashing red light and then the flashing green proceed light on your side of the door prevents entering on someone else's door strike.

OBJECTIVE #8

State When Security Personnel May Perform Physical Searches.

INTRODUCTION

To maintain a safe and drug free environment at DCPP, the security section may be authorized by the plant manager to conduct searches on company property if deemed necessary.

NEED TO KNOW

All employees on company property are subject to search at any time. All searches are by implied or expressed consent. Signs are posted near the entrance to the plant site explaining that employees are subject to search. Passing these signs upon entry to the plant is implied consent. Expressed consent is when the employee expresses agreement to a search. Consent, expressed or implied can be withdrawn at any time.

- Searches of anything except one's person requires implied consent.
- Searches of one's person requires expressed consent.

If an employee refuses to be searched, the employee will be denied access to the PA and appropriate security measures will be taken.

EXAMPLES

Random area searches may be conducted at any time at the discretion of security.

Personal vehicles may be searched at any time while on company property.

OBJECTIVE #9

Identify Materials / Items That Are Prohibited On The Plant Site.

INTRODUCTION

Regulations require restrictions to be placed on certain items. Items that have no specific job use may be defined as contraband items and prohibited from the plant site.

NEED TO KNOW

Prohibited items are:

- Firearms / Ammunition
- Incendiary devices
- Explosives
- Alcohol / Unauthorized Drugs

Call security at extension 3330 to find out if a particular item is classified as contraband.

HELP

Legally owned Mace, CS, and pepper sprays are allowed to be kept in vehicles but not brought into the PA.

When a vehicle is searched for entry into the PA and a large knife is found in the glove compartment, security would most likely hold it until the owner leaves the PA. On the other hand, if a knife such as is used for some wire stripping procedures was found among an electrician's tools, it would most likely be considered a tool and would not be confiscated.

OBJECTIVE #10 (*Site Specific)*

State worker roles and responsibilities regarding plant security policies and responses to violations of the security program.

INTRODUCTION

DCPP security is part of everyone's job.

NEED TO KNOW

If any suspicious activities or conditions are observed (e.g., vandalism, tampering, malicious mischief, or anything suspicious that may threaten worker or plant safety), immediately contact the operations Shift Manager at extension 3377, or the Security Watch Commander at extension 3330. You are not expected to put yourself in danger, but you are expected to report possible violations to operations or security.

DCPP has developed a transportation security plan for hazardous material shipments. Employees noticing any suspicious activity regarding shipments of hazardous materials or hazardous wastes should contact the Watch Commander at extension 3330 to report their observations.

HELP

Violations of Security Procedures are dealt with on a case by case basis. Disciplinary actions can range from an oral reminder to termination. If you disagree with instructions from security officers, comply and then discuss the problems encountered with a security supervisor or your supervisor at a later time.

EXAMPLES

If you receive a bomb threat by phone, get as much information from the caller as possible. Listen for background noises and contact security at extension 3330 as soon as the caller hangs up.

Maintaining security at a nuclear power plant is important, therefore, anything considered sensitive to security is marked as: **Safeguards Information**. Should you discover any of these documents unattended, call security immediately at extension 3330, and stay with the documents until security arrives.

OBJECTIVE #11 (*Site Specific)*

Explain The Procedure For Controlling Vehicles In The PA.

INTRODUCTION

The need may arise for you to operate a vehicle inside the PA. Vehicles are potential weapons for terrorists if left in a vulnerable condition within the PA.

NEED TO KNOW

Any vehicle entering the PA must be searched. The driver must know all security regulations governing the operation of a vehicle inside the PA.

The procedure is quite simple: you must drive your vehicle to the south-west corner of the security building and stop there, outside the gate. Enter the security building and proceed to the security information counter (west of the search train) and report your need to the officers behind the counter. You will need to process through the regular personnel search train while security searches the vehicle prior to allowing you to drive it into the PA.

HELP

Whenever vehicles are left unattended in the PA, the windows MUST be rolled up, doors locked and the ignition key removed. NO EXCEPTIONS, regardless of the length of time that the vehicle is left unattended.

Vehicles which are in the PA for a short time such as delivery trucks must have a security officer escort. When the vehicle is not in use, the ignition keys are retained by security and the vehicle secured.

For emergencies, to save the time required for a vehicle search, a security officer will escort the emergency vehicle while it is in the PA.

OBJECTIVE #12, (*Site Specific)*

Describe the restrictions on photographic equipment and similar devices on-site.

INTRODUCTION

The use of photographic equipment and/or similar devices is restricted at the DCPP. These devices, including those capable of video recording, may only be used if required in the course of work-related business activities.

NEED TO KNOW

- Camera-equipped cellular telephones and similarly equipped personal digital assistants (PDAs) are permitted on site; however, these devices cannot be used for non-work related photography or video reproduction.
- Visitors to the site should not bring any photographic devices inside the PA unless required in the course of conducting business.
- Unauthorized use of photographic devices may result in film being confiscated and/or digital images being erased.

HELP

The control of photographic devices on site is an individual responsibility. Anyone who observes someone taking pictures of plant structures, components or security features, outside the scope of business related activity, is to notify security at extension 3330.

The employee or contractor requesting visitor access is to explain this clearly to the visitor(s) before the site visit.

When on site, the escort must ensure that a visitor does not photograph plant structures, components, or security features, unless this is required in the course of work-related business activities.

EXAMPLES

If you see someone taking pictures inside the PA or taking pictures of the PA from the Owner Controlled Area (outside the PA fence), ask him or her if he or she is aware of the restrictions on the use of photographic devices. If you have any doubt as to the person's intent, call security at extension 3330.

OBJECTIVE #13, (*Site Specific)*

State the site rules governing the operation and parking of vehicles.

NEED TO KNOW

Vehicle Pass:

- Every vehicle entering the site must have a vehicle pass. Temporary Vehicle Passes are issued to previously cleared vehicles at the Avila Gate.
- Permanent Vehicle Passes are issued by the Badging Office in the Maintenance Shop Training Building.
- A Vehicle Pass may be used only by the person to whom it has been issued.
- Lost passes must be reported immediately to your supervisor and to the Security Watch Commander.

Diablo Ocean Drive (the Access Road):

- Passing is prohibited the entire length of Diablo Ocean Drive.
- Slow vehicles should use turnouts when necessary.
- Bicycling and walking on Diablo Ocean Drive are prohibited.
- Do not stop, leave the road, or abandon a vehicle except in an emergency.
- Drivers and passengers must stay with disabled vehicles until help arrives.

Speed Limits:

- Speed limits are enforced; radar is used.
- Diablo Ocean Drive has posted speed limits. Maximum speed limit is 50 mph. Many areas have lower limits. Drive slower when dark, during wet weather, and when foggy. The road is not banked and has many blind curves. Watch out for livestock and wild animals in the road and for farm machinery being moved.
- Plant Site roads have posted speed limits of 5 mph to 25 mph.
- The maximum parking lot speed is 5 mph.

OBJECTIVE #13, (continued)

All persons must follow directions from the Security Officers and park only in designated areas.

Parking Lot Regulations:

- When driving through parking lots, drive in the indicated lanes and follow the directional arrows. Driving against the arrows or speeding can result in serious accidents and injury.
- Park only in marked vehicle parking areas.
- Do not park in driving lanes or other areas not designated for parking.
- During shift changes, follow the directions of the Security officers directing traffic.

Violations

- A system is in effect that assigns points for various offenses and specifies the penalties. This system is administered equally to management, bargaining unit employees, and contractors.
- Some offenses including illegal passing or reckless driving may result in immediate termination.
- Every employee has the responsibility to report any violations. Jot down the license number of the vehicle in violation, include the date, time, location and nature of the violation. Submit the information to the Security Department via e-mail at DCPP Security Park.

Motor Vehicle Laws

- Laws governing the operation of vehicles apply on site. For example:
- Seat belts must be worn.
- Motorcycle riders must wear an approved helmet.
- Occupants in the bed of a pick-up truck must be in a seat and using a seat belt.

EMERGENCY PLAN SIGNAL AND RESPONSES

OBJECTIVE #1

State the purposes of the emergency plan at DCPP.

INTRODUCTION

The Emergency Planning Section is charged with the responsibility of Emergency Preparedness in case of a radiological emergency here at DCPP. Emergencies at Diablo Canyon could affect public health and safety. DCPP is dedicated to safety, and the public expects us to operate DCPP safely whether under normal circumstances, or in emergencies.

NEED TO KNOW

To meet these expectations, the purposes of the Emergency Plan are to ensure:

- The health and safety of the public and of plant personnel. This is the primary, overall goal of the Plan and deals with how to coordinate with public agencies for the safety of the public.
- DCPP is prepared to handle most radiological emergencies, at any time. This is the portion of the Plan that looks at all the possible ways an emergency could come about, and what would be the most effective way of handling the emergency in accordance with the prime directive of protecting plant personnel and the public. DCPP will always have enough trained personnel to take conservative corrective actions.
- DCPP can recover from the consequences of a serious emergency. The Plan also has step-by-step procedures for the Recovery Manager to follow for de-escalation of the emergency and returning the plant to normal operating condition.

EXAMPLES

DCPP normally holds 3-4 training drills (a.k.a. “exercises”) each year to test the plan’s effectiveness. Every two years (biennially), one of the exercises will be monitored and evaluated by the Nuclear Regulatory Commission (NRC), Federal Emergency Management Agency (FEMA), and various State agencies.

OBJECTIVE #2

List the four Classifications of Emergencies incorporated into the Emergency Plan at DCPP.

INTRODUCTION

Emergency classifications are a helpful tool for plant personnel, and all those who would be involved in responding to an emergency here at Diablo. You need to know the basic meaning of each emergency classification so you don't feel panic in a minor emergency, or ignore a significant emergency.

Each classification of emergency is a description of the current conditions at the plant.

NEED TO KNOW

1. *UNUSUAL EVENT:*
   Description - An event that indicates a potential degradation of the level of safety of the plant. No release of radioactive material has happened and none is expected. Normally the emergency siren is not sounded for an Unusual Event, and no active response is required from plant personnel outside the Emergency Response Organization (ERO). You will hear a Public Address announcement of the declaration of an Unusual Event. You are to note the announcement, continue working, but stay attentive to any further announcements.
2. *ALERT:*
   Description - Events have occurred that involve actual or potential substantial degradation to the level of safety of the plant. The Emergency response organization is normally activated at this level.
3. *SITE AREA EMERGENCY:*
   Description - Events involve actual or likely failures of the plant functions needed to protect the public.
4. *GENERAL EMERGENCY:*
   Description - Events involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity.

OBJECTIVE #3, (*Site Specific)*

Describe the emergency alarm associated with DCPP's emergency plan and your required response.

INTRODUCTION

The Site Emergency Signal is the audible alarm associated with the Emergency Plan.

NEED TO KNOW

The Site Emergency Signal is an electronic warbler siren which is a series of falling tones with each cycle lasting about 2 seconds. In an actual emergency the alarm is normally sounded for a minimum of 60 seconds.

The signal is tested every Thursday at 12:10 PM. Unless you hear the pre-test announcement, or you are instructed otherwise, all employees are to respond to the Site Emergency Signal as real, no matter how long the signal is sounded.

The same signal is used in containment and can be sounded only there if the condition is localized. Rotating red lights are provided in areas where background noises are high and people may not be able to hear the siren.

The Site Emergency Signal may be sounded for:

- A containment evacuation (no emergency declared).
- A Site Area Emergency, **or higher** level of emergency.
- An Assembly and Accountability process when deemed appropriate by the Operation's Shift Manager.

RESPONSES:

Put your work in a safe condition and go to your normal work location (where you report to at the beginning of your shift) unless a PA announcement gives instructions otherwise. For a containment evacuation, put your work in a safe condition and go to the RCA access control point unless instructed otherwise.

HELP

If the Site Emergency Signal sounds and you are unsure whether it is a drill or a real emergency, then you must treat it as the REAL THING! Public address announcements will follow so you will quickly become aware if it is only a drill.

OBJECTIVE #4

State the actions required during Emergency Plan implementation.

INTRODUCTION

In an emergency, our goals are to account for all personnel on site and to keep non-emergency personnel clear of the affected area so the specially trained emergency workers can control the plant and protect the public.

NEED TO KNOW

An emergency will initially be declared based on plant conditions and information received in the control room (i.e., by senior plant operators). As conditions change, an emergency may be escalated or de-escalated from one classification to another.

Personnel in the control room team initially classify the event and assume the role of interim site emergency coordinator until properly relieved by senior plant management.

HELP

Only designated personnel in the emergency response organization should contact the control room for vital information related to the emergency. Plant employees are instructed NOT to call or go to the control room during an emergency (i.e., to find out what is happening) to ensure the operators are not distracted while handling the emergency.

OBJECTIVE #5

Describe the importance of personnel accountability during an emergency.

INTRODUCTION

Assembly and accountability are initiated upon sounding of the Site Emergency Signal, or upon a Public Address announcement providing alternate assembly areas, or at the discretion of the Operation's shift manager. Accountability is important for preventing abandoned personnel during an emergency.

NEED TO KNOW

Accountability is the process of determining the location of all personnel within the **power block** by name.

The power block includes the following areas:
Containment buildings, Turbine and Auxiliary buildings, Laundry, Radwaste building. Auxiliary Boiler Enclosure, and the remainder of the RCA.

The importance of accountability is so all plant personnel are located. Searches would be conducted by trained rescue teams for any missing personnel. All plant personnel need to quickly go to their assigned assembly/accountability area during emergencies so they are not reported as missing.

The goal of accountability is to complete this process within 30 minutes of sounding the Site Emergency Signal, or when receiving a Public Address announcement to perform an assembly and accountability.

HELP

The process of assembling for accountability provides a system that helps us to:

- Locate and tend to any personnel injuries.
- Move response personnel into appropriate positions by discipline.
- Relocate non-essential personnel outside the power block for possible release or evacuation.
- Establish a basis for crowd control for Security by sequencing the release of assembly areas during evacuation.

The DCPP Watch Commander is the key individual for completing plant personnel accountability and assembly during an emergency. For those with assembly areas within the power block, report to an area supervisor (i.e., for the purpose of roll call).

OBJECTIVE #6, (*Site Specific)*

State the location of the employee's assigned assembly area.

INTRODUCTION

To enhance personnel safety, we have a goal of 30 minutes for completing accountability of all personnel within the power block during an emergency. To help meet that goal, we need all non-essential personnel to get out of the power block and then go to their assembly areas. Knowing where you are to assemble will help us meet that goal, and will ensure the process is orderly and less stressful for you.

NEED TO KNOW

- If you are a member of the "on call" Emergency Response Organization (ERO) team, you will report to your designated Emergency Response Facility.
- All others should consider their normal work reporting location (the place reported to at the beginning of shift) as your assigned assembly area.

HELP

Inside the Power Block there are specific assembly areas assigned to members of the ERO according to their training (e.g., Control Room, Radiological Access Control, Technical Support Center, etc.).

Escorted visitors should be taken out of the power block (preferably back to their escort's normal reporting location).

EXAMPLES

Assembly area may change depending on the type of emergency. Listen to the PA announcements and comply with them.

OBJECTIVE #7, (*Site Specific)*

Describe the process for having personnel enter the protected area to support the emergency response effort.

INTRODUCTION

During an emergency it may become necessary for personnel to enter the Protected Area (PA) to assist in the emergency response effort. To maintain accountability and to promote safety, you need to know the procedure for entering the Protected Area during an emergency.

NEED TO KNOW

Some personnel assembled outside the protected area (e.g., in either the Maintenance Shops Building or the Simulator Training Building), may be requested to enter the protected area to assist with the emergency (e.g., to relieve or assist those in the ERO). These people will normally be contacted by personal pagers or public address announcements, giving them a phone number to call. After calling and receiving instructions on how and where to report, the contacted personnel will enter the PA through the Security Building and report to the requested location as directed.

Upon entering the Protected Area the requested personnel become part of a team whose movements and activities are tracked by the Operational Support Center (OSC) Access Supervisor.

Personnel who are called out from home to support emergency response efforts will, after satisfying all Fitness For Duty requirements, report to the Security Building or whatever specific location given them by the Foreman or Supervisor who places the call. They will enter the Protected Area and be tracked in the same way as described above.

OBJECTIVE #8, (*Site Specific)*

Identify evacuation routes and off-site assembly areas.

INTRODUCTION

A crucial part of the Emergency Plan is having the ability to choose the evacuation route and off-site assembly areas that will best suit the need.

If personnel go down the wrong road, they may be exposed to a hazardous condition.

NEED TO KNOW

Of the two routes (roads) leading away from DCPP, the southern route to the Avila Gate is the one normally preferred.

Southern Assembly areas are:

- PG&E Community Center.
- Frontage Road along US 101 north of San Luis Bay Drive.
- Port San Luis Parking lot (by Fat Cats).
- Parking lot of the Avila Beach Post Office.

The northern route goes out through the Montana de Oro State Park. The Northern assembly area is:

- Montana de Oro State Park parking area (by the Ranger Station)

You will be given instructions concerning route and off-site assembly area from the public address system.

HELP

Sending personnel home early during an emergency before they are exposed to radiation or contamination is not called an evacuation, but rather, an early work dismissal.

An evacuation involves a radiological release which has progressed to the point where personnel are potentially contaminated when leaving the plant site.

Assembly area groups are released one by one to avoid traffic congestion.

OBJECTIVE #9

State the company policy concerning the release of information to the public and news media regarding an emergency.

INTRODUCTION

PG&E is committed to providing timely and complete information on significant events that occur at DCPP. Incorrect news, especially in the hands of an irresponsible reporter, could cause unnecessary widespread panic.

NEED TO KNOW

Any information released to the news media during an emergency situation must be accurate and informative. For this reason, all official PG&E news releases will be issued by designated personnel after being reviewed for technical accuracy and approved by the Recovery Manager or the Site Emergency Coordinator.

Therefore, all personnel are instructed **not to give out any information**, but rather to direct reporters to seek information from the managers in charge of the emergency.

EXAMPLES

Historically, misinformation about disasters have created undue panic resulting in much needless suffering. We can all think of instances that wrong information, regardless of how well intended, resulted in detrimental effects (e.g., Orson Wells and his "War of the Worlds" radio broadcast).

OBJECTIVE #10, (*Site Specific)*

Identify the correct response to earthquakes and tsunamis.

INTRODUCTION

Tsunamis, or tidal waves, can be huge and very powerful. Earthquakes can occur at any time and without warning. We are all familiar with the devastation earthquakes and Tsunamis can cause and we should know how to react to their occurrence.

NEED TO KNOW

During an earthquake, take the following precautions:

If indoors,

- Don your hardhat and safety glasses and take cover under a sturdy desk, table, or other furniture. If none are available, just drop to the ground or floor. If you are sheltered under something, hang on to it and stay there until the earthquake is over.
- Stay clear of all windows, including those in offices or conference rooms.
- Do not try using stairs or elevators while the building is shaking and do not use elevators until they have been inspected.
- Do not rush outside as falling glass or building parts may injure you.

If outside,

- Position yourself clear of any structures, including buildings, poles or electrical distribution lines.

If in the plant,

- Stay clear of any plant components such as energized piping, pumps, and turbine-generator set.

If in a vehicle,

- Stop if it is safe but stay inside.
- Do not stop under trees, light posts, electrical power lines or signs.

NEED TO KNOW (CONT.)

Areas at the DCPP plant site that could be particularly hazardous during an earthquake include:

- The turbine deck (or any other large rotating equipment)
- Any tank or piping system that contains hazardous chemicals, large volume of liquids, or steam and hot water lines.
- Areas where compressed and/or flammable gasses are stored.
- Areas inside the Radiological Controls Area (RCA). They should be checked by Radiation Protection for radiological hazards prior to entry.

After an earthquake, take the following precautions:

- Be prepared for likely aftershocks.
- Beware of opening any cabinets or closets as items could tumble off shelves when the doors are opened. This is especially true when making initial entries into chemical storage areas and chemistry labs.
- Check telephones on their receiver to clear phone lines.
- Wear appropriate safety equipment in the areas with broken glass or falling debris.
- Beware when opening doors to stairwells to assure that the stairs still exist.
- Do not use or walk under any cranes, scaffolds, permanent ladders or platforms in the plant until inspected. (This includes the bridge between the Admin Building and the Turbine Building until inspected.)
- Stay out of the power block unless required to be there or cleared by Operations.
- If in the plant be sure radiation levels, sump levels, temperature, and physical conditions look normal prior to entry.

During a Tsunami warning, do not go below the 85' level, the elevation of most of the yard around DCPP, until the warning has been cleared.

HELP

Tsunamis are not common in California. Fourteen have occurred since 1812, the largest the result of the 1964 Alaskan earthquake.

FIRE PROTECTION

OBJECTIVE #1, (*Site Specific)*

Identify Components Of DCPP's Passive And Active Fire Prevention Systems.

INTRODUCTION

DCPP uses passive and active systems which both decrease the possibility of fires starting, as well as limit the spread of fires.

NEED TO KNOW

The Passive Fire Prevention System is made up of components that are resistant to the starting or spreading of a fire:

- The steel and concrete walls, ceilings and floors.
- Penetration seals made of fire retardant plaster, silicone foam and pyrocrete.
- Automatic closing barriers of steel such as doors and dampers.

The Active system performs positive actions to control or extinguish fires and is made up of:

- Sprinklers.
- CO_2 flooding system.
- Halon flooding system.
- Trained fire watches and an on-site fire department as well as off-site assistance from California Dept. of Forestry and Dire Protection (CF), county and local fire departments.

HELP

All fire doors are clearly marked with permanent door signs.

Fire Detectors sense heat, flame or smoke and send a signal to a central fire alarm console in the control room.

EXAMPLES

Pyrocrete is a gray material that looks like sprayed-on ceiling foam. It protects structural steel and walls from fire and must not be removed without specific engineering and operations approval.

Fire dampers located in air penetrations look like metal Venetian blinds.

Deluge nozzles are designed to spray water on specific components.

CO_2 is heavier than air and smothers a fire by displacing oxygen. It will also smother people.

Halon is a chemical similar to the Freon. Halon extinguishes fire by a complex chemical reaction. It will not suffocate people, but you should still leave immediately if there is a Halon discharge where you're working.

OBJECTIVE #2

State Employees' Responsibility Regarding Fire Barriers

INTRODUCTION

Fire barriers can be walls, doors, insulation, sealant, and other materials and structures. A fire barrier that is not fully functional for any reason is a serious problem.

NEED TO KNOW

Fire barriers are an important part of the plant and we must take compensatory measures, such as fire watches, any time a barrier is not fully functional:

- a fire barrier that is not fully functional must be reported to the work control Shift Foreman at 3600.
- if you need to temporarily disable a fire barrier for any reason you MUST notify the work control Shift Foreman at 3600 AND the Fire Protection Section at 4256.
- fire doors must be fully closed and latched except when in use or procedurally taken out of service.

HELP

Damaged fire barriers won't retard a fire as effectively as undamaged barriers. We depend on all individuals to recognize any potential damage to our fire systems, as well as reporting it immediately it to their supervisor or to the Fire Protection Section (ext. 2637).

EXAMPLES (Damaged Fire Barriers)

Pipe penetration seals that have cracks or holes in them

A fire door that won't close and latch properly

Fire dampers that can't be opened or closed

OBJECTIVE #3, (Site Specific)

Identify The Alarms Associated With A Fire Emergency And Describe The Correct Response To Each.

INTRODUCTION

There are various systems in place to warn employees of a fire emergency and we need to be familiar with the audible alarms which will sometimes be our first and possibly only indication of an emergency condition. We need to be able to immediately recognize and properly respond to these alarms.

NEED TO KNOW

PLANT FIRE ALARM:
A 30 second, monotone signal that is sounded plant wide for fire, medical emergency, or any event that would require emergency response teams to be activated. It is tested every Thursday at 12:05 PM.

When you hear the Plant Fire Alarm:

- look around to see if the emergency is in your area. If not, continue working and listen for further Public Address announcements.
- If there is an emergency in your area, put your work in a safe condition, and evacuate to a safe place.

FIRE SUPPRESSION ALARMS:

- CO_2: A pre-discharge alarm that is a shrill siren sounded 30 seconds prior to discharge. The CO_2 system is also equipped with a wintergreen odorizer that is released upon discharge.
- HALON: Some Halon areas have a ringing bell to warn of system trouble. All Halon systems have a loud horn and red strobe light as a warning of imminent discharge.

If you are in an area equipped with CO_2 or Halon fire suppression systems and hear a pre-discharge alarm, you will have 30 seconds to evacuate the area prior to discharge. Because CO_2 and Halon can be toxic, DCPP prefers that you not only evacuate the immediate area but also the entire building. Go outside and remain there until the area is declared safe. Also never enter an area that smells of wintergreen, as that scent indicates a release of CO_2 has occurred.

HELP

If a fire grows to an Alert level or greater emergency, the Site Emergency Signal will sound, and public address announcements will alert personnel in the affected areas.

Only the CO_2 has the wintergreen odor added to it to warn personnel of a discharge, the Halon does not.

CO_2 is heavier than air, so avoid the floor and low areas if you suspect a CO_2 discharge has occurred.

A Halon discharge does not reduce visibility and it's hard to detect. Halon does not suffocate people like CO_2, but you should still leave if there is a discharge in your work area.

EXAMPLES

Response teams may be needed for hazardous materials releases such as oils, solvents, gases, or corrosives.

CO2 or Halon systems are installed in computer labs, the control room, and any place where water would cause severe damage.

OBJECTIVE #4, (*Site Specific)*

State actions required upon discovery of a fire.

INTRODUCTION

If all fire prevention efforts fail it could suddenly become your job to rapidly and correctly report the fire. Knowing what to do could help save lives and property.

NEED TO KNOW

Go to a phone in a safe area away from the fire. Remember to stay low, use stairs rather than an elevator, move quickly but don't run.

Dial 779, the emergency number here at DCPP. It is posted on all plant phones.

STAY ON THE LINE and give the control room operator the initial information requested. Stay on the line until the operator tells you to hang up. The operator will take the information, put you on hold, contact response personnel, and sound the alarm then, come back to you for detailed information. It may sound as though the operator has hung up, but stay on the line unless you are in danger.

The emergency number and the telephone location is posted on a red sign next to plant phones. That's important because the Operator may send the response team to your location at the phone and have you guide them the rest of the way to the emergency.

Once the fire brigade arrives they may ask your assistance. Assist if you can, but most importantly, stay safe.

Always report the fire first before taking any action. Only those who have proper training and equipment should ever attempt to fight a fire (and only after it is reported first).

All fires need to be reported to Operations, even small fires that are quickly extinguished or burn themselves out. You can use the normal (non-emergency number) to call the work control Shift Foreman at 3600.

HELP

If the control room does not answer the 779 call within four rings, the fire alarm will sound automatically.

OBJECTIVE #5,

Discuss fire prevention measures including fire loading, handling of flammable material and hot work.

INTRODUCTION

Preventing fires is the main priority of the DCPP fire protection system. Each employee has a major role to play in recognizing potential fire safety problems and dealing with them effectively.

NEED TO KNOW

Each room at Diablo has a **"maximum allowable fire load**" for that area- a limit on the amount of burnable material that can be present at any time.

Combustibles temporarily stored in the plant are called transient fire loads. To track the amount of transient fire loads in plant fire areas, the fire protection group uses "**transient combustible permits**".

Whenever using combustible material on a job, limit the amount to just what is needed to get the work done.

When the job is done, return any unused combustible material to its proper storage area. In a safety-related area, return the material to its storage area by the end of shift unless the Fire Protection group has approved temporary storage in the area.

Contact the Fire Protection Section or the Shift Foreman prior to bringing large amounts of combustibles into the plant.

Helpful hints in controlling combustible materials:

- Clean up after your job, place any oily rags into covered metal containers.
- Put paper and other combustible material into trash cans.
- Do not allow combustible materials to accumulate at your job.
- Follow procedures and the instructions in work packages.
- Keep compressed gas cylinders secured in 2 places with protective caps installed.
- Do not block emergency fire fighting equipment or exit routes. They must be available in case of an emergency.

NEED TO KNOW (CONT.)

- Obey posted warning signs such as "NO SMOKING OR OPEN FLAMES". This means that even a small spark could result in a fire or an explosion.
- Keep portable space heaters away from combustible materials.
- Do not throw cigarette butts from automobile windows along the access road.

Any work evolution that has the potential for starting a fire is called "hot work", and requires a "welding and open flame permit". Welding, grinding, and flame cutting are examples of hot work.

A big part of fire prevention is reporting problems with the fire protection system. Please report any of the following:

- Missing or empty fire extinguishers.
- Damage to fire hoses, missing nozzles.
- Blocked sprinklers, smoke detectors, fire extinguishers or hose reel stations.
- Large gouges in silicon foam.
- Large chips or cracks in plaster or pyrocrete.
- Damaged or blocked fire dampers or doors.
- Fire doors that don't fully close and latch on their own.

HELP

There are also limits to how much flammable liquid can be stored in a metal flammable liquid storage cabinets. Ask supervision for guidance.

EXAMPLES

Use of wood that is not fire retardant is not permitted on site without authorization. Contact supervision if wood is discovered that does not appear to be fire retardant.

Work space restrictions sometimes require running hoses or cables through fire doors or dampers thereby disabling the fire barrier. Control Room permission is required before doing this.

A damaged fire damper may appear like a cockeyed Venetian blind.

Fire Watches are people trained to watch for, report, and extinguish fires within their capability. When they are on duty, do not distract them in any way, such as asking them to get you tools or supplies.

INTRODUCTION TO RADIATION PROTECTION

OBJECTIVE #1

Define and differentiate Radioactive Material, Radiation, Radioactive Contamination, and Dose.

INTRODUCTION

Everyone working at DCPP should know some radiological terms, even if you are not assigned to work in the radiological areas.

NEED TO KNOW

Radioactive Material is any material containing unstable (or radioactive) atoms. This material gives off radiation as it decays.

Radiation is the energy given off by unstable atoms.

Radioactive Contamination is small dust-like particles of radioactive material where it is unwanted.

Dose is a measure of the amount of radiation absorbed by the body.

HELP

Radioactive Material is any object which emits radiation as it decays. Uranium is a natural radioactive material. Other radioactive materials are man-made. Your own body has naturally occurring radioactive potassium and carbon atoms in it. Everyone has this. All of your ancestors did, too.

Radiation is energy. Radiation can't get on you, or on your clothes. You can not be carry radiation from place to place any more than you can carry sunlight around.

Contamination is radioactive dirt. Radioactive contamination is radioactive material in a place we don't want it. The fuel in the reactor is radioactive, but we don't call it contamination because we want the fuel to be radioactive. If the same fuel was spilled on the ground we'd call it contamination.

Dose is the term to measure the amount of radiation. Gasoline is measured in gallons, potatoes are measured in pounds, and radiation exposure is measured in REMs. Everyone on earth gets radiation dose from the sun, the stars, the rocks, and the air. Radiation workers also get dose from the plant and they wear instruments that measure this dose.

EXAMPLES

Coleman lantern mantles used to be radioactive (natural), although the ones for sale now are not.

Home smoke detectors (man-made) are examples.

Radiation comes in many forms such as X-rays, cosmic radiation from our sun, microwaves, infrared, etc.

Radioactive Contamination can be matter in any form: solid, liquid, or gaseous and can become attached to everything from dust on the floor, machinery, or people. There may or may not be enough of it for you to see. There is no way to tell by looking whether "dirt" is radioactive or not.

OBJECTIVE #2

Define the term "background" radiation and contrast the average amount of radiation dose received by radiation workers and members of the general public.

INTRODUCTION

Most people are under the impression that radiation is only received at places like hospitals and nuclear plants, but we all are exposed to radiation 24 hours a day, every day.

NEED TO KNOW

Background radiation is low-level radiation exposure from natural or man-made sources, which are always around us. The average yearly radiation dose received from background radiation in the United States is about 360 millirems per year.

In comparison, the average United States radiation worker (rad worker) receives about an additional 100-200 millirems per year working at commercial reactors like Diablo Canyon. Non-rad workers, those who work at the plant site but do not work in the Radiological Controls Area, receive no additional measurable dose.

HELP

Some people receive more exposure than others because background levels vary. People that live in the Andes mountains, for example, receive more radiation from natural sources than a radiation worker in the U.S. is allowed to receive.

EXAMPLES

Some sources of background radiation exposure are: the stars and our own sun, fallout from weapons testing, and radioactive materials in the earth's crust.

OBJECTIVE #3

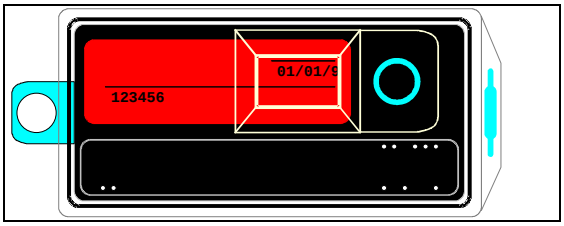
State the purpose of dosimetry and portal radiation monitors.

INTRODUCTION

There are many devices that are used at DCPP to measure and monitor radiation levels and exposure. We will discuss two devices with which you as a non-rad worker may come in contact.

NEED TO KNOW

TLD



The thermoluminescent dosimeter (TLD) is used to measure and record personnel exposure. The TLD provides the permanent dose record for employees.

Non-rad workers do not wear a TLD,but you may see them at monitoring stations around the site as part of our continuous monitoring program.

A portal monitor is an electronic radiation detector used to verify that no radioactive material leaves the site. Everyone must be checked by a portal monitor before leaving the protected area. The portal monitor looks like a door frame, with no door.

Proceed through the portal monitor as follows,

- ◊ The portal monitor will have a green light illuminated when it is ready to check you.
- ◊ Step into the portal monitor and pause.
- ◊ Observe the lights on the panel to your right. The green (ready) light on the right side will change to yellow, which means the machine is counting.
- ◊ When you hear a chime, and the yellow light goes out, the count is finished and you can exit.
- ◊ If a red light illuminates, along with an alarm, step back and repeat the process. Treat all portal monitor alarms as real!
- ◊ If you receive an alarm you must try again. Wait until the portal monitor shows the green ready light or use a different portal monitor.
- ◊ If you receive a second alarm, call Radiation Protection (RP) at Ext. 3247, and then just stand aside until RP arrives. The phone is on the wall near the portal monitor in the security building.

HELP

Notify the dosimetry office if you have recently gone through any medical treatment involving the use of radioactive materials.

Having an x-ray WILL NOT make you alarm the portal monitor. Remember that radiation is energy and you can't carry it from place to place. If your doctor has you eat or drink radioactive material (such as a thyroid test or a heart test) then you have radioactive material inside your body that will give off radiation until it decays away or is eliminated from your body.

Radiation treatment for cancer can involve x-rays (no radioactive material in your body) or ingesting radioactive material (which will cause portal monitor alarms).

Portal monitors can sometimes alarm due to malfunction or just a fluctuation in the level of background radiation. Treat all portal monitor alarms as real, these are our last line of defense to ensure potentially radioactive material is not leaving the plant site.

EXAMPLES

Portal monitors look like free standing metal door frames without a door. The alarm is a high pitch electronic monotone sound lasting for a few seconds.

OBJECTIVE #4

Identify potential long-term effects from being exposed to low levels of radiation.

INTRODUCTION

The question here is two-fold: are there long term health risks to being exposed to radiation, and are non-rad workers being put at a higher risk by working at DCPP?

NEED TO KNOW

Since we know for sure that a large amount of radiation received over a short period of time (acute dose) is harmful, it is assumed (but not statistically shown) that a small amount of radiation received over a long period of time (chronic dose) is also harmful relative to the total dose received.

If adverse health effects do occur from chronic exposure such as from background radiation or occupational exposure, it would most likely be some form of cancer.

HELP

Radiation risks to unborn children are higher than for adults. If you desire further information concerning pre-natal exposure, please contact the RP Manager's secretary at ext. 4325.

EXAMPLES

Acute dose: such as medical treatment for some large cancers usually involve large doses that could result in loss of hair, blood changes, sickness, and other effects.

Chronic dose: such as normal occupational exposure, results in no visible effects, but may slightly increase the risk of a future cancer.

A good example of the difference between Acute and Chronic doses is the difference in sunbathing for one hour a day for seven days (Chronic) or sunbathing for seven hours in one day (Acute).

Federal limits are set to minimize risk. In addition, Diablo Canyon, through the use of an administrative guideline, reduces risks even further. The Federal limit for whole body dose is 5 rem per year. The Administrative guideline at Diablo Canyon is 2 rem/year. The General Public (including non-rad workers) limit is 100 millirem per year.

OBJECTIVE #5

Contrast the risk of working in a nuclear facility to the risk in other industries.

INTRODUCTION

There are health risks at any large industrial site. Falls, hazardous materials, construction accidents, etc., but how does the nuclear industry compare to other industries for safety?

NEED TO KNOW

The NRC published a regulatory guide number 8.29, which compares the nuclear industry to other occupations. Nuclear power is definitely not the safest occupation, but it is far from the worst. It ranks as a "low to medium" risk. At US commercial nuclear power plants, no deaths have occurred as a direct result of over-exposures to radiation or contamination.

The overall risks (reduction in life expectancy) associated with working at a nuclear power plant are lower than those at other types of power production plants.

HELP

The incredible amount of quality control and safety stressed at nuclear plants are big reasons for their superior safety records.

EXAMPLES

Teaching, as an occupation, ranks safer than nuclear power. Construction, agriculture, and mining rank well below (i.e., have much more risk than) nuclear power in safety.

OBJECTIVE #6,

State the colors and symbols used on radiological postings that identify radiological areas and your actions should these areas be encountered.

INTRODUCTION

Within the plant, there are areas that are posted as radiological controls areas (RCA). These are areas you cannot enter unless you get additional training to become a radiation worker. It would be to your advantage to be able to recognize these areas and know how to respond should you encounter them.

NEED TO KNOW

All radiological barriers are marked by yellow and magenta (light purple) postings. These are usually in the form of rope or ribbon strung between stanchions, enclosing the area, with signs hanging from them that provide more information about the area. Also there is normally yellow and magenta tape on the floor or walls marking the area boundaries.

The signs will have a yellow background with magenta lettering and a magenta tri-bladed symbol (called a tre-foil).

Non-rad workers are never to cross these boundaries in any way. If a radiation boundary is blocking an assigned job, contact your supervisor…**do not move the boundary!**

If you encounter anything outside the RCA that has yellow and magenta stickers, tape, paint, signs or labels, do not touch it, keep others away, and report it to the RP section.

HELP

Remember, do not reach over or under barriers, imagine they are invisible walls that reach from the ceiling to the floor. Only Radiation Protection technicians can move barriers and postings.

EXAMPLES

Some examples of activities which are not allowed unless you are a qualified radiation worker are:

- Working on a piece of equipment that is marked with yellow and magenta tape.
- Entering a posted radiological area to pick up trash.
- Removing a cover or manway opening that have yellow and magenta (i.e., radiological) warnings.

Whether it is a rope or ribbon strung across an area, or tape on the floor, these barriers should be treated as walls going from the floor to the ceiling.

INDUSTRIAL SAFETY

OBJECTIVE #1, (*Site Specific)*

Identify safety barriers, signs, labels, and state worker responsibility for adherence to permits and safety instructions.

INTRODUCTION

There are two parts to working safely, recognizing the various safety warnings, permits, and instructions, and then following them.

NEED TO KNOW

Safety instructions and postings come in many forms: procedures, permits, signs, barriers, and labels. Of course the company expects you to read and follow all applicable safety instructions and to obtain all required permits before beginning work.

Examples of permits include:

- Transient Combustible Permits used for moving or temporarily storing combustibles in some areas of the plant.
- Welding or Open Flame Permit, always required when welding or using a possible ignition source.
- Confined Space Entry Permit, always required when entering a confined space.

Some of the most widely used postings are:

- black and yellow (yellow and red for arc flash boundary) ribbon or tape indicating an energized electrical hazard. Do not cross this boundary. Remember electricity can arc beyond the equipment.
- yellow and magenta rope, ribbon, tape, or signs indicate a radiological hazard and requires written permission to cross the boundary.
- red and white rope, ribbon, or tape identifies a general hazard, such as an open floor plug or rigging operations. Once you have identified the particular hazard, you may cross the boundary with appropriate caution.
- a Department of Transportation (DOT) diamond shaped placard on containers or transport vehicles warn of specific hazards inside.

NEED TO KNOW, continued

- hazardous material container labels at DCPP are known as Green Labels and it is your responsibility to ensure that these labels are on any container of hazardous material that you use.
- seals are plastic or metal strips put on certain plant components by operators to indicate that the component position has not been changed. Do not tamper with them. Notify the control room if you inadvertently break a seal or find one broken.

EXAMPLE

Red and white rope or tape is used to mark areas where material is being moved with a forklift or crane.

- Never walk under a suspended load
- Stay a safe distance from a load- it can topple towards you
- Slings that support loads are in tension and they can snap- STAY OUT OF THE LINE-OF-FIRE
- Stay out of the load path of moving loads
- Notify the rigger if you see a problem with the load or rigging. Anyone can give an emergency stop signal to the operator if necessary. Signal the operator by waving your arms and shouting "stop"
- Keep in mind that the riggers and crane operators need to watch the load, NOT YOU.

HELP

Green Labels can be obtained from the tool cribs and many other places, just ask your supervisor. Ensure you read these pre-printed labels and use the required personal protective equipment (PPE).

You will receive additional training on hazardous materials your job requires you to use.

OBJECTIVE #2, (*Site Specific)*

State worker responsibility for reporting injuries, near misses, unsafe conditions, and administration of first aid.

INTRODUCTION

To prevent injuries is, of course, our goal and reporting injuries and near misses is a big part of the program to reduce injuries. We also need to know how to deal with injuries when they happen.

NEED TO KNOW

The responsibility each of us has to watch out for safety hazards comes easily. Indeed we all have that instinct. Reporting them, however, takes a little effort.

If you are involved in an injury, a near miss, or you are aware of some unsafe condition, contact your supervisor with the information so that the incident can be documented and acted upon.

As for handling injuries that require immediate medical aid, you are required to call 779 and give whatever first aid you are qualified to give without putting yourself at risk.

HELP

Why report a seemingly insignificant injury? In case of complications, having the incident documented makes insurance claims much easier.

The purpose for documenting near misses is not to fix blame but to determine the cause to prevent similar accidents in the future.

EXAMPLES

A broken or missing handrail, a defective ladder, a frayed electrical cord are unsafe conditions that need to be reported. Some of these types of problems can be handled by simply taking the items out of service and attaching an information tag, and returning the item to the tool crib or appropriate place. A Notification should be written for plant problems.

Do not put yourself at undue risk when administering first aid. To determine if you face a risk requires you to assess the situation and make a judgment call. If someone has a severe wound and is bleeding profusely, you must assess the risk to you. If someone is unconscious and lying among electrical cables, you need to determine if person is still in contact with an energized source?

OBJECTIVE #3, (*Site Specific)*

State the purpose of the clearance process and recognize clearance tags and their proper use.

INTRODUCTION

Diablo Canyon, like all large industrial facilities, has a program to verify equipment is de-energized when people are working on it. The DCPP system is called e-SOMS and it uses tags to identify the equipment that can't be operated.

NEED TO KNOW

The primary purpose of clearances and their associated tags is to remove energy from plant equipment to protect people and/or equipment during maintenance and testing.

Clearances also:

- Authorize work
- Track and control the alignment of plant systems (configuration control)
- Control the removal from service of plant equipment for tagging
- Control the return to service of plant equipment after tagging

Types of tags:

Danger tag- used to maintain personnel safety by tagging devices to:

- Isolate sources of liquid, steam, or gas.
- Isolate electrical power.

Caution tag- used to designate open vents and drains on clearances, control plant equipment configuration for testing, operating procedures, or work orders. Note: If the valve must be closed as a clearance boundary for **personnel** protection, a Danger Tag must be used.

Red tag- used by clearance holders (maintenance department) and workers to provide personnel protection by ensuring that a clearance point will not be violated.

Information tag- used to provide general information regarding the status of equipment. They are meant to be used for short term, abnormal situations.

Tags are very important to safety. If you ever find a tag on the floor, call Operations at 3600 and report it.

HELP

The clearance process is very specific and is tied closely to plant technical specifications. Under no circumstances are you to remove or relocate any tags. Notify your supervisor if any tag causes a problem for your work.

Do not physically remove a component that has a tag attached to it.

OBJECTIVE #4, (*Site Specific)*

State the plant policy regarding how, when, and where to use personal protective equipment (PPE) and safety equipment.

INTRODUCTION

Obey all postings for the use of proper PPE.

The general PPE requirements while in the power block, intake, warehouse, or shop areas are:

- Hard hat
- Safety glasses/goggles
- Appropriate footwear
- Gloves (on your person)
- Hearing protection, where posted

NEED TO KNOW: Body Protection, Machinery

When working around rotating or reciprocating machinery, observe the following precautions:

- Ensure that loose gloves, clothing, and/or hair do not become entangled in equipment. Button or properly roll up long sleeves, tuck in shirt tails, and remove ties. Restrain loose or long hair.
- Do not wear jewelry.
- Wear badge lanyards of breakaway-type material Secure to clothing to keep it from hanging loosely

NEED TO KNOW: Eye & Face Protection

- Safety glasses shall meet ANSI Z87.1 standards.
- Safety glasses shall be worn in all posted areas of the power block – or anywhere an eye hazard exists.
- Enhanced tight fitting eye protection should be worn when performing activities such as handling insulation or other times when a high dust/particulate environment may exist. Refer to table in OM6.ID4 for minimum glasses, goggles, and face shield requirements.

- Do not wear dark-tinted or mirrored glasses inside that reduce light unless required by the job, such as welder-helper glasses or working in direct sun light.
- Contact lenses are permitted if appropriate eye protection is worn. If chemical protection is necessary when wearing contact lenses, wear chemical goggles.
- Wire rim or metal frame glasses are not approved for electrical maintenance work within minimum approach distances on exposed energized parts unless safety cover glasses are worn over metal frame glasses during this work.

NEED TO KNOW: Foot Protection

- Sturdy shoes or boots are required in the power block, laboratories, and shop areas.
- Wear safety shoes/boots during the performance of work where there is a potential crushing or cutting hazard to the foot.
- Wear appropriate shoes that minimize potential for slipping or tripping in office/administrative areas.
- Wear specific required protective footwear such as chemical-resistant boots or metatarsal protectors if the task warrants this protection.
- Wear metatarsal guards when operating or working in the vicinity of compactors, pavement breakers, or jackhammers.

NEED TO KNOW: Hand Protection

- Wear appropriate hand protection when physically engaged in maintenance, operational, or other industrial work activities anywhere on site.
- Work gloves may be removed only when necessary to perform "delicate" work requiring dexterity not achievable while wearing work gloves.
- Gloves shall be carried by all employees who enter the power block, intake, warehouses, or shop areas at the plant (e.g., leather or mechanics style gloves). Gloves are not required to be carried in protective hallways or offices.

- Work practices where hand protection shall be required include:
  - Working where the slip of a tool could result in hand injury
  - Working where pinch points may exist
  - Handling sharp or abrasive objects
  - Handling lumber or scaffolding materials
  - Handling slings, wire ropes, chokers, etc.
  - Handling sheet metal, or insulation
  - Climbing scaffolds, structures and in and around plant equipment
  - Working on or around high temperature equipment
  - Pushing or pulling carts or hand trucks
- Do not wear gloves when working with rotating machinery (e.g., lathe, drill press, circulating saw, since the glove may become caught in the equipment causing a much greater injury).

NEED TO KNOW: Hearing Protection

- Hearing protection shall be worn in posted areas or in any area where noise levels require a person to raise their voice to be heard. This includes most areas of the power block.
- Ensure double hearing protection is worn or is in your possession in posted areas

NEED TO KNOW: Head Protection

- All personnel shall wear approved hard hats in construction areas and all areas of the power block with the following exceptions:
  - Offices
  - Classrooms
  - Control Room
  - Restrooms
  - Access Control
  - Laboratories
  - Personnel elevators
  - Protected hallways and stairways
- Hard hats shall be worn in exempt areas when overhead hazard exist.
- Hard hats must be inspected regularly by the user. Unless otherwise specified by Radiation Protection, personal hard hats are to be worn in Surface Contaminated Areas (SCAs) in which protective clothing hoods are not required.
- Personal hard hats used in SCAs are released from the RCA via an ARGOS/GEM unit or equivalent.

NEED TO KNOW : Eyewash Stations & Safety Showers

Eyewash stations and safety showers are located at various locations around the plant where hazardous chemicals are used. Know the location of the nearest shower and eyewash station when you are using chemicals. Familiarize yourself with the operation of the equipment BEFORE you or a co-worker need to use them.

EXAMPLES

Hard hats are to be worn centered on your head with the brim parallel to the floor, visor facing forward.

If for any reason you cannot wear protective equipment in the recommended manner, contact your supervisor for guidance.

OBJECTIVE #5

Recognize hazards and risk reduction methods associated with plant equipment.

INTRODUCTION

Most of us will use some kind of plant equipment to do our jobs and may receive additional training in its safe operation. There are however, additional hazards present in the work place that we should recognize.

NEED TO KNOW

Ladders

Ladders are such simple tools we often neglect safety precautions such as making sure the ladder is in good condition, we have the right ladder for the job, that extension ladders are tied off or supported by a co-worker, and that we use both hands and face the ladder when climbing.

Electrical Equipment

This equipment can be AC or DC at voltages ranging from a few volts to thousands of volts. Sometimes you don't even need to come into direct contact with a power source to receive serious electrical burns.

If you are authorized to work on electrical equipment be sure it is properly cleared (removed from service) and tagged (Danger tag) before beginning work. Beware of open electrical panels, frayed cords, water on or near electrical equipment, missing ground plugs, or any hidden hazards before drilling, or nailing. Never touch a person who may still be in contact with a live circuit.

Work Area Barriers Suitable barriers shall be erected to ensure that workspace for working on or near exposed energized equipment will not be used as a passageway (e.g., when working in open equipment cabinets, vertical boards, or equipment drawers). To enter or work within these barriers, you must be qualified as a Knowledgeable Electrical Worker (KEW) or a Qualified Electrical Worker (QEW). The successful completion of this lesson qualifies you as a NON-Electrical Worker. It does NOT qualify you as a KEW or QEW.

NEED TO KNOW (CONT.)

Non Electrical Workers

Non-electrical workers are responsible for not working unsupervised on electrical equipment (exposed or not) until it has been proven de-energized by a qualified individual using a "live-dead-live" voltage check. Non Electrical Workers shall not enter a Shock Protection Boundary, except as allowed by the new electrical safety procedure.

Steam Leaks

Steam is normally at an elevated pressure and temperature and can cause serious burns.

Stay alert for visible vapor coming from a valve or pipe, whistling noises, increased area temperatures, or moisture on walls, ceiling, floor, or adjacent equipment. Maintenance, RP, and Operations personnel conduct tours on an ongoing basis, erecting signs and barriers should steam leaks be discovered.

Compressed Gases

A compressed gas container can become an unguided missile should the valve stem be broken off. In addition, these gases can be toxic, flammable, oxygen depleting, and a danger to eyes and ears due to pressure escaping from relief or blow-off valves.

Never direct compressed gases at any part of your body. Always store bottles upright and tied off in two places. Always ensure the safety cap is on when the bottle is being moved or is in storage. Never lubricate the cylinder valves, regulators or gauges.

Moving / Rotating Equipment

Boom cranes, motor operated valves, unguarded drive shafts, and lathes are a few examples of hazards that could pinch or cut hands, or capture loose clothing, gloves, lanyards, ties, or jewelry and draw you into the equipment.

Heed postings and alarms and do not tamper with guards or shrouds. Do not operate or work on equipment without proper authorization.

OBJECTIVE #6, (*Site Specific)*

Identify methods of reducing risk associated with Industrial hazards.

INTRODUCTION

In our day-to-day work routine we can encounter jobs that carry obvious, inherent risk while others are sudden and unplanned. Job planning and an alert, cautious approach to all of our activities will increase safety.

NEED TO KNOW

Some potential operational hazards at DCPP include:

Asbestos

Asbestos has been identified as a carcinogen/reproductive toxin under California Prop. 65 as has other substances we have here at DCPP such as hydrazine, chromated water, and nickel. Asbestos may be found in gaskets, lagging, and insulation.

To work on components that may contain asbestos the area will be posted, and restricted to authorized personnel who have been trained in accordance with procedure IDAP OM6.ID5. If you are not authorized, do not enter any area posted “DANGER, ASBESTOS WORK IN PROGRESS”

Confined Spaces

There are over 600 identified areas here at DCPP that are posted as confined spaces. Confined spaces can be dangerous (contain life threatening atmospheres), therefore **NEVER** enter a confined space unless you have first completed confined space training (a separate course). Also qualified (i.e., trained) entrants must meet the requirements of the "confined space entry permit" (as specified in plant procedure OM6.ID3).

Heat Stress

Overheating of the body occurs due to activity or environment.

Reasonable precautions include having a pre-entry medical exam before working in a known heat stress environment, modifying the environment before entering, limiting exposure time, and drinking fluids.

NEED TO KNOW (CONT.)

Fall Hazards

Pipes, cables, rope, conduit, and many other items could cause tripping. Some areas of the plant may have open pits or trenches, as well as scaffolding or other elevated work platforms which could constitute a fall hazard.

Additional fall protection training is available and required for some workers (see plant procedure OM6.ID13). This training gives guidance on wearing safety harnesses and restraints when working on elevated surfaces of six (6) feet or more, and life vests when working over water that is more than five (5) feet deep. However, your diligence in observing your surroundings is still your first line of defense.

High Noise

Any area in which it is difficult to hear or be heard should be considered a high noise area.

Ear protection is required in high noise areas and the company provides ear plugs and ear muffs for use in the plant.

Falling Objects

Dropped scaffold knuckles, tools, or equipment can severely injure or kill someone.

Scaffold toe boards, tool lanyards, good housekeeping, wearing hard hats, approved shoes, safety glasses, and having an awareness of activity around you are ways of preventing injury from this type of hazard.

Eye Hazards

Airborne debris, sparks, sharp points on equipment, and other types of hazards await your eyes in any industrial setting.

Frontal eye protection is required inside the radiological controls area and in all other posted areas. Safety glasses and other types of eye protection are provided by the company as needed. Contact lenses are not considered eye protection.

OBJECTIVE #7, (*Site Specific)*

Recognize the effects of noise on hearing, and the various parts to DCPP's hearing conservation program (including proper hearing protection and audiometric testing).

INTRODUCTION

There are numerous motors, pumps, tools, operations and evolutions which can generate a considerable amount of noise. High noise areas can exist throughout the plant. You need to know how to properly protect your ears from these high noise areas, which may eventually lead to temporary or permanent hearing loss.

NEED TO KNOW

The effects of high noise on hearing can be more than just permanent hearing loss, it can also create increased stress as well as an increase in accidents (when workers can't hear instructions or warning signals).

As previously discussed, hearing protection is required in high noise areas. Different hearing protectors come with a noise reduction rating (NRR), the higher this number the better the protection.

The three types of hearing protection available include:

1. **Earplugs** - includes the formable (foam rubber or waxed cotton) and pre-molded (silicone rubber or plastic) types. These fit into the ear canal. Formable fit all ears, pre-molded come in different sizes or can be custom molded to fit. They are all light and usually comfortable, but take special care and a little time to properly don (may not be best choice for someone entering and exiting high noise areas frequently). The formable types are disposable after a single use, the pre-molded types should be washed with warm soapy water after each use and stored in a clean carrying case.
2. **Canal caps** - are made of a plastic U-shaped headband with rubber caps that fit over the ear canal. They are also light and usually comfortable, and are relatively easy and quick to properly don (a good choice for someone entering and exiting high noise areas frequently). They are usually less effective in reducing noise than earplugs. Canal caps should be washed with warm soapy water after each use and stored in a clean place.

NEED TO KNOW (CONT.)

3. **Earmuffs** - are usually made of a metal U-shaped headband with plastic cups that fit **over** the entire ear. They are relatively easy and quick to properly don (another good choice for someone entering and exiting high noise areas frequently), but they are bulky and usually become uncomfortable after prolonged use, especially when also wearing glasses. They are generally less effective in reducing noise than earplugs. Earmuffs should be cleaned and cared for in accordance with the manufacturer's directions.

Lastly, DCPP performs initial and annual **audiometric** testing. Employees who spend significant time around noisy equipment are required to be in the hearing conservation program (e.g., Operators, Maintenance, etc.). For other personnel, audiometric tests are optional.

The initial audiometric test is to establish a baseline (your ability to hear when you first start in the program), along with annual follow-ups to identify any hearing loss so it can be dealt with accordingly (e.g., change to better hearing protection). The test involves being placed in a quiet room and responding to certain tones when you hear them, responses are recorded on a device called an audiogram.

HELP

Noise is measured in two ways, frequency (cycles per second) and intensity (loudness which is measured in decibels or dB). Hearing loss occurs more readily with louder noise, higher frequencies, and prolonged exposures.

After audiometric testing, the trained technician or doctor will discuss the audiogram results with you.

Note: Stuffing plain cotton in the ears (instead of finding real hearing protection) is not very effective in reducing noise.

EXAMPLES

Look for the noise reduction rating (NRR) on the hearing protection packaging (or on the box of disposable earplugs). The number represents the decibels reduced.

Custom earmuffs that are attached to your hardhat are also available (swivel on or off as needed).

Signs of permanent hearing loss include:

- inability to hear high-pitched or soft sounds
- trouble understanding conversations on the phone
- ringing or roaring in the ears

HAZARDOUS MATERIALS

OBJECTIVE #1

Recall the eight types of hazardous chemicals found at DCPP and their health risks.

INTRODUCTION

In order to protect yourself from hazards, you have to know what hazards there are.

NEED TO KNOW: TYPES

The eight types of chemical hazards at DCPP include the following:

- Irritants
- Toxic substances
- Corrosives
- Flammables
- Carcinogens
- Compressed Gas
- Sensitizers
- Reproductive Toxins

NEED TO KNOW: RISKS

Irritant -- substances that can cause irritation of the skin, eyes, or respiratory system.

Toxic- substances that can cause severe illness, poisoning, birth defects, disease, or death.

Corrosive - A liquid or solid chemical (acids/bases) that causes a visible, and painful destruction of human tissue at the site of contact.

Flammables – substances that are easily ignited and capable of burning rapidly

Carcinogen - materials which either causes cancer in humans or because it causes cancer in animals is considered to be capable of causing cancer in humans.

Sensitizer - a chemical that causes a substantial proportion of exposed people to develop an allergic reaction after repeated exposure

Reproductive Toxins - may cause one to become infertile or to have difficulty conceiving a child.

EXAMPLES

IRRITANTS

- Sodium hydroxide
- Metal Dust
- Fiberglass

TOXIC SUBSTANCES

- Hydrazine
- Gluteraldehyde

CARCINOGENS

- Hydrazine- Lung Cancer
- Asbestos- asbestosis
- Methylene Chloride- all cancers

SENSITIZERS

- Isocynates
- Gluteraldehyde

REPRODUCTIVE TOXINS

- Benzene
- Lead

HELP: EXPOSURE ROUTES

The four routes of exposure to chemicals include:

- Inhalation – you breath the chemical into your body
- Absorption – you take the chemical in through your skin
- Ingestion – you either eat the chemical or it comes in through your mouth
- Injection – the chemical can enter through a puncture into your skin.

NEED TO KNOW: EFFECTS

Health Effects may be immediate or delayed.

Acute are those immediate effects which occur within 24 hours

Chronic are long term effects which do not appear immediately upon exposure and appear days after exposure.

EXAMPLES: EFFECTS

ACUTE

- Corrosive burns
- Irritation reaction

CHRONIC

- Cancer
- Sensitization

HELP: DETECTING HAZARDS

You may detect chemical hazards by:

- Odor
- Irritation or other health effects
- **Exposure Monitoring**-The preferred way if you believe you are being exposed to chemicals!

OBJECTIVE #2 *(site specific)*

Identify and label hazardous materials and waste.

NEED TO KNOW: Definitions

The three definitions are as follows:

- Hazardous Material is any material that presents a risk to people or the environment
- Hazardous Waste is hazardous material that is no longer useful
- Mixed Waste is hazardous waste that is radioactive

HELP: Information Sources

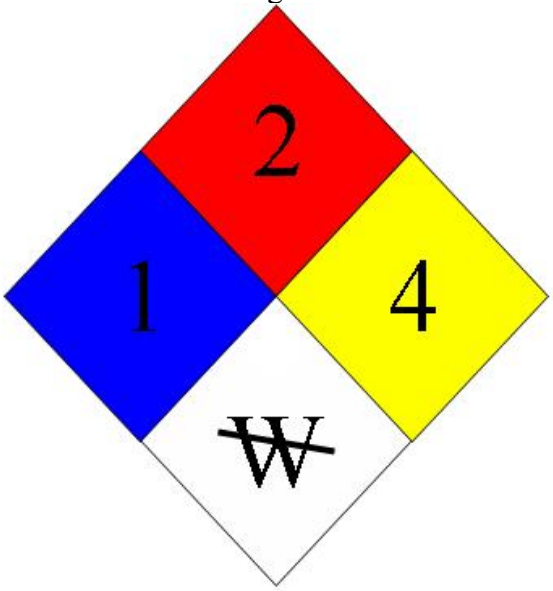
Sources of information on hazardous materials include the following:

- Chemical inventory list
- Postings
- Labels
- Material Safety Data Sheets (MSDS)
- Hazard-Specific Training Courses

NEED TO KNOW: NFPA DIAMOND

The National Fire Protection Association (NFPA) Diamond

- Number Scale rates substances 0-4 (**4 most dangerous**)
- Red is Flammable
- Blue is Health
- Yellow is reactivity
- White is specific hazard
- W with a bar through it means USE NO WATER



HELP: Chemical Information

Help with chemicals can be found on the

- Safety Webpage

http://wss/dcpp/IndustrialSafety/default.aspx

- Environmental Webpage

http://wwwnpg/chem/env/Env%20Home%20Page.htm

NEED TO KNOW: GREEN LABEL

A Green Label transfers hazard information from manufacturer container to breakdown container.

A Green Label must have the following:

- Product name
- Primary hazards

HELP: DO NOT need Green Labels

These products DO NOT require a Green Label:

- ORANGE (low hazard) products in original container
- Aerosol cans
- Non-Hazardous materials
- Working equipment

HELP: DO need Green Labels

These products DO require a Green Label:

- Red (flammable), Yellow (reactive), White (corrosive), Blue (toxic) products in original container
- ALL breakdown containers

HELP: Pipe Labels

Pipes in the power plant that contain hazardous materials are color coded or labeled with the name of the chemical that is inside Look for pipe labeling signs at building entrances.

NEED TO KNOW: Breakdown Containers

OSHA regulations (29 CFR 1910) require that all secondary product (breakdown) containers be labeled

ALL breakdown containers require Green Labels, no matter what is inside.

Containers of water must be labeled with a sticker or have the word "water" written on the side.

HELP: RULES FOR LABELING

Observe these rules for labeling hazardous waste:

- Never leave unlabeled hazardous waste around the plant site.
- Label small amounts (<55 gallons) with a Green Label or other similar identification. Include your name or work order.
- Place in workplace accumulation area.
- Contact your supervisor or the Shift Foreman if you find unlabeled hazardous waste.

NEED TO KNOW: MSDSs

Material Safety Data Sheets (MSDSs) are information sheets, supplied by the chemical manufacturers, on products that:

- tells what chemicals are in the product,
- what the hazards of the chemicals are,
- how to protect yourself from the hazards.

HELP: MSDS Sections

Sections on an MSDS include:

- Chem product Company ID
- Ingredients/Composition
- Hazard Identification
- First Aid Measures
- Firefighting Measures
- Accidental Release
- Handling and Storage
- Exposure Control/PPE
- Phys. and Chem. Prop.
- Stability and Reactivity
- Toxicological Information
- Ecological Information
- Disposal

- Transportation
- Regulatory information
- Additional Information

HELP: MSDS Sources

MSDSs are available online on the SAFETY Intranet site.

http://wwwnpg/home/index.htm#Safety

HELP: Definitions

On the MSDSs, you may see two abbreviations used in the studies:
NOEL and LD50.

- NOEL – No Observable Effect Level (the chemical causes no effect.)
- LD50 – kills 50% of the test population
- (LD means Lethal Dose)

OBJECTIVE #3

Recall general rules to protect yourself from chemical hazards.

INTRODUCTION

Your individual responsibilities for chemical safety include:

- Understand the chemical hazards in your area
- Use appropriate PPE and safety equipment
- Be familiar with emergency procedures
- Participate in chemical safety training
- Know your limitations

NEED TO KNOW: General Rules

Control chemical hazards by:

- Substitution of less toxic material
- Engineering controls
- Administrative controls
- Personal Protective Equipment (PPE) controls

NEED TO KNOW: Engineering Controls

Engineering Controls, in general, means ventilation:

- General Ventilation, Building HVAC
- Local Ventilation(Chemical Fume Hood &Fans)

HELP: Work Practices

Common Sense Work Practices to reduce chemical exposure and reduce accidents:

- DO: Cap or cover all chemical containers that are not in use.
- DO: keep rags saturated with chemical away from you.
- DO: Change gloves frequently.
- DO: Wash your hands after handling chemicals.
- DO: Work in a well ventilated area when ever possible.
- DO: Practice good housekeeping.
- DO NOT: Put thing in your mouth around chemicals.

HELP: PPE Guidelines

- Eye protection must meet ANSI standard
- Wear gloves at all times when working with chemicals
- Change gloves frequently.
- Use the right glove for the job.
- Check with your supervisor when in doubt.

OBJECTIVE #4 *(site specific)*

Properly store hazardous materials and waste.

INTRODUCTION

Why we control Hazmats at DCPP

- Protects people
- Regulatory requirement
- Good environmental stewardship

NICE TO KNOW: Guidance

Procedures and Guidance:

- EV2.DC4 Hazardous Materials Management Program gives the guidelines for review, purchasing, and storage of hazardous materials.
- Road Map to Hazmat Country gives a comprehensive look at hazardous materials at DCPP. http://wwwnpg/chem/env/Hazmat%20Page.htm

NEED TO KNOW: Prior Review & Approval

ALL hazmats need review and approval BEFORE they are brought on site. See EV2.DC4 for guidance.

You must not just bring in new hazardous materials without that review and approval.

HELP: PPE Guidance

For guidance on PPE, check with your supervisor or check with the Safety Webpage

http://wss/dcpp/IndustrialSafety/default.aspx

NEED TO KNOW: Compressed Gas Cylinders

Compressed gas cylinders are hazardous material. They may be both a

- Flammability hazard
- Asphyxiation hazard

Storage and handling guidelines:

- **Gas cylinders must be tied off in two places**
- See procedure MA1.ID9 for further guidance on storage

HELP: HAZWASTE Accumulation Areas

Hazardous Waste Workplace Accumulation Areas

- Allowed by regulations for temporary storage of small quantities of waste.
- Conveniently located near work areas.
- Waste must be segregated and not mixed.
- Containers have yellow waste label.
- Label tells what is in container and accumulation start date.
- Container in place until 95% full or for no more than 10 months.
- Keep drums closed and lids tight.
- Call Hazardous Waste Coordinator (Call 3382) to have drum placed in your work area if needed.
- Never bring hazardous waste to DCPP for disposal even if it comes from another PG&E facility.

HELP: HAZWASTE Inspection

What to look for:

- All waste material in drums or in a bag and labeled.
- Area looks neat.
- No spills or drips.
- All containers labeled.
- No mixing of wastes.
- Call 3096 or 3382 for assistance or to pick up waste. Anyone may call.

DEFINITION: Incompatible Materials

Incompatible Materials may react to produce toxic gases, heat and/or an explosion, or degrade a container.

HELP: INCOMPATIBLE?

What do we have that could be incompatible?

- Strong acids and bases
- Sulfuric acid and caustic, sulfuric acid and water
- Some two part epoxy paints
- Hydrazine and hydrogen peroxide
- Hydrazine and dry paper, cloth, or solvents
- Bleach and ammonia
- Acids and some metals and cyanide plating solutions
- Aggressive solvents and some plastics
- Corrosives in metal cans

HELP: How Do You Know?

How do you know if it is incompatible?

- Check the MSDS.
- Check the “separate from” section of the Green Label.
- Call Environmental Engineering or ask your supervisor.

HELP: Storage

General rules for hazmats storage include:

- Store with compatible (like) products.
- Store in compatible containers with lids.
- Flammables in flammable materials locker (locker provides secondary containment.)
- Flammables in plastic need high density / fluoridated polyethylene (HDPE / FLPE) container **and** solid cap for storage.
- Corrosive, reactive, toxic liquids in secondary containment – high density/ low density polyethylene (HDPE / LDPE) plastic bin.
- Refer to Green Label or Road Map to Hazmat Country. http://wwwnpg/chem/env/Greenlabel2/Hazmat%20Storage.htm

EXAMPLES

Product	Storage
Manufacturer's container of motor oil (Orange)	Any stable, safe location
Bottle of ETA from chemical tank (White-B)	With other White-B chemicals in plastic tub
Aerosol can of WD-40 (Red)	Flammable materials locker
Manufacturer's container of battery acid (White-A)	With other White-A chemicals in plastic tub
Unopened Manufacturer's container of epoxy paint (Red)	Flammable materials locker
Tube of silicone grease (Orange)	Any stable, safe location

HELP: Color Codes

Blue - Toxic (Poisonous) Materials

White A - Inorganic Acidic

White B - Inorganic Bases

Yellow - Reactive Chemicals

Orange - Low Hazard

Red - Flammable Materials

INTRODUCTION: Universal Waste

Universal waste includes:

- Waste batteries,
- Partially full or empty aerosol cans,
- lamps and other devices containing mercury,
- electronic devices, and
- agricultural pesticides.

HELP: Universal Waste

- Dispose of Universal Waste in labeled drums at workplace accumulation areas or in the special white plastic pails located around the plant.
- DO NOT dispose of in the regular trash.
- DO NOT bring material in from home to dispose of.
- Keep lids closed tightly on the drums and pails.
- Contact Hazardous Waste when drum or pail is full.

OBJECTIVE #5 *(site specific)*

State what to do in a chemical emergency / chemical & oil spill.

NEED TO KNOW

In a chemical emergency / chemical & oil spill

- Ensure your SAFETY first
- Isolate the area
- Inform coworkers of the emergency
- Call 779

NEED TO KNOW: Oil Spill

Oil is considered a hazardous material just like acids and toxic substances. Chemical and oils spills that go to the creek or the ocean must reported to federal, state, and local agencies. DCPP has an oil spill prevention program called the SPCC Plan and procedures for reacting to chemical spills. These plans may be viewed on line or in the Environmental Library.

Any chemical or oil spill that goes to the creek or ocean or that has the potential to pollute the environment must be reported. Call 779.

HELP: Minor Spill

If you are aware of the hazards of the chemical you are working with and the spill is minor, you can clean it up yourself, with spill kit supplies from 1 kit.

Examples of minor chemical spills are:

- Cleaning solution spilled on turbine deck
- 8 oz of acetone on Auxiliary Building floor
- Drips of oil in the parking lot

HELP: Major Spill

If you are unaware of the hazards of the chemical you are working with, the chemical is extremely toxic, volatile, in large quantities, or in an unusual location: Call 779

Examples of major chemical spills:

- Hydrazine leaking from bulk tank
- Ammonium Hydroxide tank leaking
- Leak at Sulfuric acid skid
- Any chemical or oil spilled to the ocean, creek or a drainage ditch

OPERATING EXPERIENCE

OE 16833 from Clinton NPS.

- Spilled corrosive – trisodium phosphate (TSP)
- Used blue chemical spill pad (for oils) to clean up.
- Should have used pink pad.
- No harm done, but points out that using wrong pad could lead to problems.

What chemical spill pad choices do we have at DCPP?

- Pink and Green chemical spill pads – for aggressive liquids
- White pads and booms – absorb oils, not water
- Gray pads and booms – absorb oils and water

HELP: Emergency Equipment

Know the location of all emergency equipment:

- Spill kits
- Shower and eyewash
- Fire extinguishers
- First aid kit

HELP: Reporting

- Call 779
- Report all injuries and near misses to supervisor

QUALITY

OBJECTIVE #1

State the function of the Nuclear Quality Verification Department.

INTRODUCTION

PG&E, as owner and operator of Diablo Canyon Power Plant, is responsible for its safe operation. To help fulfill this responsibility, and to meet the regulatory requirements of 10CFR50, Appendix B, PG&E has instituted a comprehensive Quality Assurance (QA) Program covering all quality related aspects of plant design, construction, and operation.

The Nuclear Quality Verification (QV) Department performs audits, assessments, independent inspections, independent technical reviews, quality assurance program interpretations and employee concern investigations for their respective functional area of oversight.

You are also a vital part of the QA Program. Your commitment to quality work and alertness to potential quality problems is essential to the safe operation of DCPP.

NEED TO KNOW

The intent of our QA Program is to provide effective and efficient control of quality-related activities associated with DCPP. That control will assure that all quality related personnel activities and the performance of quality related equipment meet appropriate standards. That control will also provide all workers, including management, with the assurance that quality-related objectives are being achieved.

In short, the Quality program provides adequate confidence that systems, components, and structures will perform satisfactorily while in service.

HELP

In order to assure the quality of operation at DCPP is meeting or exceeding all applicable standards, the QA Program must review:

- In plant procedures, policies, specifications, and inspection reports.
- Industry standards, industry events, and new technological developments.
- Regulatory standards.
- Work in progress for compliance to the above.

EXAMPLES

Our QA Program sets high performance standards for the plant staff and equipment, then puts into place a system of audits, assessments, reviews, inspections, record keeping, communication, and accountability that ensures those standards are met or exceeded.

OBJECTIVE #2

State the function of QV inspectors.

INTRODUCTION

QV Inspectors provide a means to control and measure the characteristics of an item, process, activity, or facility to established requirements. QV Inspectors also provide our management with feedback on how well site personnel are performing their work activities.

For most of us, QV Inspectors will be our direct point of contact with the DCPP Quality Assurance Program.

NEED TO KNOW

QV Inspectors are responsible for checking, testing, and verifying that pre-established specifications have been met.

HELP

QV Inspectors measure, visually inspect, and perform non-destructive testing on components.

EXAMPLES

Along with other groups such as In Service Inspection (ISI) and various committees, QV Inspectors verify conformance with the documented instructions, procedures, and drawings used at DCPP.

A QV inspector may observe an entire job or just monitor a specific step in the job.

A QV Inspector may perform examinations, measurements, tests of materials or products, and observations of work.

OBJECTIVE #3, (*Site Specific)*

Identify worker responsibilities in maintaining the QA program.

INTRODUCTION

You are an integral part of our QA program. Pride of craftsmanship and the desire to accept nothing less than a quality product should be the goals of each worker and supervisor.

NEED TO KNOW

Each individual is responsible for performing every job in a quality manner and doing every job right the first time.

HELP

Each individual is responsible for doing all work according to written procedures and asking supervision for guidance when questions arise regarding procedure use.

EXAMPLES

Every individual at DCPP should strive to perform all work to the highest standards. While some companies may expect you to do the job the fastest way or the cheapest way, the regulatory agencies, our stockholders, customers, and the general public expect that Diablo Canyon will be operated to the highest standards.

OBJECTIVE #4

State the authority of QV Personnel and the company policy on harassment of QV personnel.

INTRODUCTION

To be effective, the QA Program at DCPP must have independence from plant management and the authority to effectively monitor the quality of work done at DCPP.

NEED TO KNOW

The QA Program at DCPP is required by federal law. Therefore, any threat, assault, or interference with QV auditors or inspectors while performing their jobs is a federal offense punishable by a fine and/or imprisonment.

Harassment, intimidation, retaliation, or discrimination of QV personnel during the performance of their duties will not be tolerated by PG&E and may result in termination of employment.

QV personnel have the authority to stop jobs in progress when quality concerns warrant further investigation.

HELP

Problems or disagreements should be referred to supervision or upper management for resolution.

EXAMPLES

Just like security personnel have authority to stop a person from proceeding if there is a security violation, QV personnel have the authority to stop work if it violates quality requirements.

OBJECTIVE #5

State the purpose of QV audits, assessments, process monitoring, and inspections.

INTRODUCTION

On occasion you may be involved in a QV audit, assessment, process monitoring, or inspection. This does not necessarily mean that you personally are being evaluated; more likely, the system or program you are working on is the focus.

NEED TO KNOW

The purpose of QV audits, assessments, process monitoring, and inspections is to verify and document the level of quality.

HELP

Audits, assessments, and inspections all mean observing activities, equipment, or reviewing documentation to verify conformance with the accepted standards.

EXAMPLES

QV audits, assessments and inspections provide an independent check of completed work via real-time observations and review of documentation.

OBJECTIVE #6

State basic worker responsibilities regarding Quality Control (QC) hold points.

INTRODUCTION

Many procedures and work packages have QC hold points written into them and you need to understand that the hold points are as important as any other part of the document.

NEED TO KNOW

When a QC "hold point" is encountered in a procedure or work package, the individual is required to stop the job and callt the QV Work Order Dispatch number (4733) so that an inspector can monitor performance of that step. Work cannot proceed beyond a QC hold point. Willful violation of a QC hold point is a serious action and is subject to discipline up to termination of employment.

HELP

Your work package will normally list the QV dispatch number of 4733 and you will usually know the discipline type of QV inspector you need when your work package has QV hold points. If you don't have a way to contact QV, then notify your supervisor when you reach a hold point.

EXAMPLES

You are in charge of a crew assembling a Reactor Coolant Pump using a step-by-step written procedure. Prior to many of these steps, a notation could be found in the procedure identifying a QC hold point. Before doing that step QV must be contacted. An inspector will come to the job site and verify the work that has been done and possibly observe the next step or whatever action is called for in the procedure. Then the inspector will sign off the step as complete. The benefit of QC hold points is the validation that work such as clearances, torque values, and other critical measurements has been done in accordance with procedure. If an error is found, you may have to redo the steps from the last QC sign-off.

OBJECTIVE #7

Identify items of potential non-conformance and how to report them.

INTRODUCTION

Problem reporting and resolution is very important at a nuclear power plant. The problem reporting process begins with **YOU!**

Each employee can recognize problems in their own area of expertise. Our expectation is that each employee will promptly identify problems to supervision, who in turn will create notifications to report those problems prior to the end of their shift.

NEED TO KNOW

The individual identifying the issue should:

a. Ensure the appropriate immediate action to place the plant or process in a safe condition has been initiated.

b. Evaluate the situation for additional immediate actions.

c. Notify the Shift Foreman, work control Shift Foreman, or Shift Manager for problems involving plant equipment or potential operability, reportability, or personnel safety concerns.

d. Notify the group supervisor about the issue to determine what additional actions may be necessary.

If a notification does not already exist, supervision will create a notification prior to the end of shift and approve it within 3 working days.

HELP

If you suspect that there may be a problem, or if you just aren't sure that it is a problem, fail conservative and report it.

Further direction for problem reporting is in plant procedure OM7.ID1, 'Problem Prevention and Resolution'.

EXAMPLES

Problems may be, but not limited to, the following:

- Failure to adhere to requirements or using the wrong procedure.
- Near miss for personnel injury
- Personnel safety hazard.
- Housekeeping/FME discrepancies.
- RWP violation or personnel contamination.

OBJECTIVE #8, (*Site Specific)*

State an individual's responsibility to maintain a safety conscious work environment.

INTRODUCTION

PG&E and the NRC share the expectation that employees report any observed or suspected problems related to the safety of the plant.

NEED TO KNOW

It is the responsibility of all employees, PG&E or Contractor, to report potential or actual problems concerning Nuclear Safety. The preferred method of reporting concerns is to the employee's direct supervisor, however other avenues do exist for reporting concerns. The important point is that the concern be brought to light.

It is the company's responsibility to maintain an environment where employees feel comfortable bringing up problems without fear of reprisal or harassment.

Safety Culture- An organization's values and behaviors modeled by its leaders and internalized by its members that serve to make nuclear safety the overriding priority.

A good safety culture is achieved when all employees:

◊ firmly believe in nuclear safety,

◊ make nuclear safety a priority every day, and

◊ feel free to raise safety concerns to supervision at any time.

The most efficient and expeditious method of reporting concerns is to tell your direct supervisor. The Employee Concerns Program (ECP) acts as an internal safety net for those instances where the employee is not satisfied with the

supervisor's response or actions, or for instances where the employee is not comfortable reporting the problem to the supervisor.

The NRC is an alternate means of reporting problems if the employee is not willing to report the problem to PG&E, or not satisfied with PG&E's handling of the problem. All employees have the legal right to report problems to the NRC at any time.

In addition to reporting the problem, the employee (or the supervisor) needs to document the problem by writing a Notification.

What is a Differing Professional Opinion (DPO)? When your professional opinion is different from the professional opinion of the existing staff, disagrees with a management decision or policy position, or takes issue with a current or proposed practice involving technical, legal or policy issues. If you find yourself having a Differing Professional Opinion, please refer to OM3.ID6 for more information or contact ECP at extension 4994.

HELP

The ECP may be contacted by:

Personal contact with the ECP Staff (Administrative Building, 3rd floor, Room 327)

E-mail to: DCPP ECP Hotline or ECP Hotline@pge.com.

Phone 4994 (offsite 1-805-545-4994, inter-company 8-691-4994) or:

Co. Mail:	US Mail:
ECP 3/327, Bldg. 104 DCPP	ECP 3/327, Bldg. 104 PO Box 56 Avila Beach, California 93424

OBJECTIVE #9

Explain how to report nuclear safety concerns to the Nuclear Regulatory Commission.

INTRODUCTION

Each worker has the right to contact the Nuclear Regulatory Commission (NRC) at any time and request an inspection if a violation of any regulation has occurred, or if there are unsafe radiological conditions or practices at the plant. PG&E in no way discourages the employee from contacting the NRC.

NEED TO KNOW

Posted at various places in the plant are copies of NRC Form-3 that show the telephone numbers of the NRC regional offices.

HELP

NRC Form 3 is posted at several locations throughout the plant. This form has current addresses and telephone numbers for contacting the NRC.

If an inspection is requested, the NRC will:

- take appropriate steps to protect the requester's identity
- protect the individual from being discharged by the company for filing the complaint
- notify the individual in writing if the complaint is rejected because no reasonable grounds exist.

Resident and visiting NRC inspectors are also frequently on site conducting inspections and oversight, and employees may freely talk with them in person.

Unless specifically requested by the NRC, it is a violation of federal regulation to announce or otherwise communicate the arrival or presence of NRC inspectors to other employees (i.e., as a warning to "shape up" before being observed).

OBJECTIVE #10, (*Site Specific)*

State the purposes of the following plant safety-related programs: Reactivity Management program, Seismically Induced Systems Interactions Program (SISIP), Configuration Control, and Radio Frequency Interference (RFI).

INTRODUCTION

Several programs exist at nuclear plants to ensure that the plant operates optimally and is prepared for emergencies. You need to be aware of how your work can affect these programs.

NEED TO KNOW

Reactivity Management includes all activities that could affect the reactivity (power level) of the reactor. Among the things that a worker might do that affects reactivity are changing the flow, temperature, volume or concentration of chemicals in the reactor coolant.

SISIP stands for **Seismically Induced Systems Interactions Program** (as spelled out in Administrative procedure AD4.ID3). It is simply a program to monitor and control adverse effects on important plant equipment due to the effects of earthquakes. The SISIP concern is that workers might leave tools or equipment (ladders, toolboxes, scaffolds) in a place where it might damage important plant components in an earthquake.

Configuration control means keeping certain equipment properly lined up and ready so it works when needed. You are not to open or close valves or breakers, disconnect power supplies, or alter plant equipment without a work order and specific instructions from your supervisor.

Radio Frequency Interference (RFI) is the term for plant equipment giving erroneous readings when a radio transmitter is nearby. No personal devices that transmit radio signals (including cell phones) are allowed in the power block.

EXAMPLES

Reactivity Management is affected by the concentration of chemicals in water that goes into the reactor. Do not add or remove water from the spent fuel pool or any tank in the plant without permission of the ops department.

SISIP concerns - Improperly stored or unsecured temporary equipment (e.g., ladders, tool boxes, scaffolds, etc.) could topple, roll, or slide into safe shutdown equipment, causing enough damage to render the equipment inoperable. In addition, attaching (e.g., tie-wraps) temporary power or lighting to a conduit that supplies power to safe shutdown equipment must also be avoided. DCPP has procedure AD4.ID3 to ensure temporary equipment is properly stored, positioned, or restrained such that it will not impact and damage vulnerable targets (safe shutdown equipment) during an earthquake. This is verified by performing inspections to detect potential Seismically Induced Systems Interactions (or SISIs), and then ensuring that all potential SISIs are resolved.

A simple example of **configuration control** would be firefighters expecting water to come out of their hose when the last valve is opened. If you ever inadvertently bump a valve, switch, breaker, etc., possibly changing its position, report it to your supervisor immediately.

In addition to radios, cellular phones create a **radio frequency interference (RFI)** hazard simply by being "on". Cell phones act as mini radio transmitters constantly looking for a signal, especially when they lose communication with cell phone towers. This means that unlike handheld radios, the user does not have to take any action at all to make the phones transmit on their own. Our handheld radios will not transmit until the user keys up. To be conservative, cell phones should not be brought into the power block.

HELP

When working around plant areas containing safe shutdown equipment (vital areas), ensure all temporary equipment is secured or stored away from safe shutdown equipment. Keep an eye out for SISI concerns.

If you have questions or concerns about SISIP issues, then if possible, refer to the procedure, AD4.ID3 for more guidance. You can also talk to your supervisor, or call the Engineering Fix-It-Now (EFIN) team hotline at 2000.

OBJECTIVE #11, (*Site Specific)*

Describe the DCPP management commitment to the philosophy that everyone is responsible for nuclear safety.

INTRODUCTION

One of the performance gaps that we have encountered at DCPP is that everyone does not understand, or has not adopted, the philosophy that Nuclear Safety is everyone's job. We want to ensure that each and every one our employees understand their role in keeping DCPP a safe place to work.

NEED TO KNOW

The concept of a healthy Nuclear Safety Culture (hereafter, "Safety Culture") applies to every employee in the nuclear organization, from the board of directors to the individual contributor, with the focus on nuclear safety. Executive and senior managers are the leading advocates of nuclear safety; however, nuclear safety is a collective responsibility, and no one in the organization is exempt from the obligation to ensure safety first. The following procedures formally capture the stations expectations. Program Directive (PD) OM16 – Nuclear Safety Culture and administrative procedure OM16.ID1 – Safety Culture and Safety Conscious Work Environment (SCWE)

Nuclear power plants are designed, built, and operated to produce power in a safe, reliable, efficient manner. Most plants today achieve high levels of safety, impressive production records, and competitive costs; all reinforced by decisions and actions made with a long term view of safety being the overriding priority for the station and for each individual associated with it. Nuclear safety is a collective responsibility. No one is exempt from the obligation to ensure safety first.

INPO has published a document entitled, "Principles for a Strong Nuclear Safety Culture" containing attributes indicative of a healthy safety culture.

1. Everyone is personally responsible for nuclear safety. Responsibility and authority for nuclear safety are well defined and clearly understood.

2. Leaders demonstrate commitment to safety. Officers, directors, managers and supervisors are the leading advocates of nuclear

safety and demonstrate their commitment both in word and action.

3. Trust permeates the organization. A high level of trust is established in the organization, fostered, in part, through timely and accurate communication.

4. Decision making reflects safety first. Personnel are systematic and rigorous in making decisions that support safe, reliable plant operation.

5. Nuclear technology is recognized as special and unique. Special characteristics of nuclear technology are taken into account in all decisions and actions.

6. A questioning attitude is cultivated. Individuals demonstrate a questioning attitude by challenging assumptions, investigating anomalies, and considering potential adverse consequences of planned actions.

7. Organizational learning is embraced. Operating experience is highly valued, and the capacity to learn from experience is well developed.

8. Nuclear safety undergoes constant examination, and oversight is used to strengthen safety and improve performance.

"Many departments at DCPP have developed a set of specific fundamentals for their area. Six of these fundamentals are common across all departments; one is entitled, "Quality Reporting and Resolution is Automatic." The key idea of this is for you to actively report safety and/or quality concerns through the Corrective Action Program. These site expectations are monitored via the management observation program as well as our Performance Improvement processes."

That's all folks!

Fitness for Duty Handout

Generic

Site Specific

Instructor Materials

1. This lesson is taught as Web (Computer-) Based Training.

Student Materials

1. Student handout

Lesson References

1. OM14.ID1 Fatigue Management Rule Program.
2. SAPN50326927 (Task 24)
3. NEI 03-04 (Rev 7), *Guidelines for Plant Access Training*
4. 10 CFR 26, *Fitness For Duty Subpart I Fatigue Management Rule*
5. OM14.ID1, *Fatigue Management Rule Program*
6. This lesson is designed for web (computer) based training.
7. The information in this lesson will be evaluated by the use of a test.
8. This material has been extensively rewritten so there are no revision bars.

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Introduction

Lesson introduction

The lesson's generic section is in strict accordance with the NANTeL generic Fitness for Duty (FFD) lesson so that it is universal in objectives.

- Effectiveness measure – the students will know what being Fit for Duty is, what their rights and responsibilities are under 10CFR26, and comply with the rules and regulations governing all nuclear power plants in the US as to Fitness for Duty.
- Passing on a Computer-Based Test is 80%

Objectives

Terminal objective

There are no tasks directly addressed in this generic lesson guide.

Enabling objectives

The following objectives apply to the lesson.

#	Generic Objective Text
1	State methods used to implement the basic Access Authorization (AA) and Fitness-for-Duty (FFD) requirements for all workers who have unescorted access to the Protected Area, assigned duties at the Technical Support Center or Emergency Operations Facility in support of the emergency plan, or FFD administrative personnel.
2	Recognize the personal and public health and safety hazards associated with the abuse of legal and illegal drugs and alcohol.
3	Identify the Employee Assistance Program (EAP) services available to the individual.
4	State the effects prescription drugs, over-the-counter drugs, dietary factors (e.g., food products such as poppy seeds or hemp oil) may have on drug and alcohol test results
5	State the roles and responsibilities of the Medical Review Officer (MRO) and the Human Resources FFD and EAP staffs in the FFD program.
6	State individual roles and responsibilities under the Access Authorization and Fitness-for-Duty program.
7	Recognize indicators of or precursors to aberrant behavior and that behavior may change quickly
8	Recognize illegal drugs and indications of the illegal use, sale or possession of drugs.
9	Describe Behavior Observation Program (BOP) techniques for detecting performance degradation, impairment, or changes in individual behavior including work performance, social interactions, and personal health.
10	Recognize behaviors adverse to the safe operation and security of the facility including an unusual interest in or predisposition towards security and/or involvement in operations activities outside the normal work activities' scope.
11	State individual responsibility and process for handling and reporting behavioral problems and Fitness-for-Duty concerns
12	State the supervisor's role and responsibilities under the Access

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#	Generic Objective Text
13	Describe the procedure for the timely removal of a potentially untrustworthy or unreliable person from the Protected Area.
14	State the individual's responsibility and process for referral to the Employee Assistance Program.
15	Demonstrate understanding of the requirement to report all legal actions that could impact an individual's reliability and trustworthiness.
16	State the symptoms of worker fatigue and contributors to decreased alertness in the workplace.
17	State the contributors to worker fatigue.
18	State the contributors to circadian variations in alertness and performance.
19	State shift work strategies for obtaining adequate rest.
20	State the NRC-mandated sanctions with regard to FFD program violations
21	State the role of the Reviewing Official in the processing of FFD concerns
22	State the indications and risk factors for common sleep disorders.
23	State the effective use of fatigue countermeasures
24	State individual rights regarding the Access Authorization and Fitness-for-Duty program
25	State the potential adverse effects on job performance of prescription and over the-counter drugs, alcohol, dietary factors,

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Generic Objectives

FFD Implementation

Objective 1

State methods used to implement the basic Access Authorization (AA) and Fitness-for-Duty (FFD) requirements for all workers who have unescorted access to the Protected Area, assigned duties at the Technical Support Center or Emergency Operations Facility in support of the emergency plan, or FFD administrative personnel.

Introduction

We have to be especially careful working at a nuclear power plant. If we are unsafe at work we not only put ourselves in danger, but also our co-workers, friends and families, our neighbors, and the public. In the workplace, stress, fatigue, physical illness, and substance abuse are the most common causes of employees not being fit for duty. We have designed a program to meet its responsibilities to the public, stockholders, company employees, and regulating agencies.

Need to know

Federal Law requires that each utility licensed to operate a nuclear facility establish a written Access Authorization & Fitness For Duty policy that will:

- provide reasonable assurance that plant personnel will perform their duties in a reliable and trustworthy manner and are not under the influence of any substance, legal or illegal, or mentally or physically impaired (illness, mental stress, fatigue) from any cause which in any way may adversely affect their ability to safely and competently perform their duties
- have a goal to create an environment free of drugs, alcohol, and their effects
- provide reasonable measures for the early detection of persons who are not fit to perform duties within the scope of the program
- provide individuals with assistance for Fitness-For-Duty related problems

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Nice to know

Why is substance abuse linked to trustworthiness? The NRC feels that someone who abuses drugs in violation of Federal and Civil law and in violation of company procedures and policies cannot be trusted to comply with other procedures and policies and is therefore a threat to the safety of the public and plant personnel.

Why is having a FFD program good business for PG&E? It is Federal Law, helps in recruiting trustworthy personnel, protects the public, and provides help for a wide range of problems for the employees.

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Need to Know: Chemical Testing

There are five categories of chemical tests:

1. **Pre-access** - conducted within 30 days prior to granting of unescorted access or assignment to any emergency operations facility or technical support center.
2. **Random** - may be conducted at various unannounced times of the day, night, weekend and holidays.
3. **For-cause** - testing shall be requested by the supervisor:
   a. Following any observed impairment which indicates possible substance use or abuse in violation of FFD program rules.
   b. After receiving credible allegations that a person is abusing drugs or alcohol and when further corroborative information has been established.
4. **Post-event**: testing shall be requested by the supervisor:
   a. Following an accident involving human error that causes:
      I. a personal injury that involved a failure in individual performance (human error) that is recordable at the time of the event or reasonably could ultimately be recordable under OSHA standards, or
      II. a radiation exposure or a release of radioactivity in excess of regulatory limits, or
      III. actual or potential substantial degradations of the level of safety of the plant, if there is reasonable suspicion that the person's behavior contributed to the event.
5. **Follow-up** - will be performed for any individual, if access is re-instated, after testing positive for drugs or alcohol to verify continued abstention from the use of substances. Follow-up testing is administered in addition to random testing.

A breath alcohol content or oral fluid test will be used for alcohol, and a second, confirmatory breath alcohol content test will be used if the test result is 0.02% or greater.

Practice

A chemical test requested by a supervisor after credible information that a worker has been abusing substances is called a

A. For cause test
B. Post-event test
C. Follow-up test
D. Suspension test

Ans: A

Hazards of Abuse

Objective 2

Recognize the personal and public health and safety hazards associated with the abuse of legal and illegal drugs and alcohol.

Introduction

Even though the Fitness for Duty program encompasses all causes of impairment, there is an emphasis on the abuse of drugs and alcohol. From an employers' perspective, a person who has a history of substance abuse becomes a high liability.

Need to Know

Substance abusers:

- have four times as many accidents
- file five times as many worker compensation claims
- use about three times as many sick benefits
- are absent about twice as often
- make about twice as many mistakes
- cause 50 percent of all vehicular accident deaths
- cause 500,000 serious injuries in vehicular accidents each year

The chances of an employee becoming a hazard to the public, the company, or other personnel increases dramatically should that employee become a substance abuser.

Practice

Substance abusers:
A. File about twice as many worker compensation claims
B. Have about three times as many accidents
C. Cause 50% of all vehicular accident deaths
D. Make about half again as many mistakes

ANS: C, substance abusers are hazardous to everyone's life and health

Employee Assistance Program

Objective 3 Identify the Employee Assistance Program (EAP) services available to the individual.

Introduction Despite every effort, we sometimes encounter problems that we cannot handle on our own. At those times it is good to know there is a place to go and someone to talk to that is more than just a sympathetic ear, but someone who can offer real assistance in solving the problems.

Need to Know The Employee Assistance Program (EAP) has a counselor available for assisting employees with a broad range of problems. The counselor is skilled in dealing with problems related to stress, emotional dysfunction, psychological impairment, addictive behavior, and much more. They provide employees with:

- short-term counseling
- referral services
- treatment monitoring
- confidential assessment

Nice to Know The EAP counselor may talk with you in private on-site, or refer you to someone off-site.

Counseling through EAP is confidential unless the EAP staff determines that an individual's condition or actions pose or have posed an immediate hazard to the individual or to others. In such case, 10CFR26 requires notification of company management even if the employee was self-referred.

Employees may be self-referred or be referred by their supervisor or the company medical staff. Participation in EAP is voluntary, but all workers with unescorted access must be fit for duty.

Contractors that are authorized by their company, and all utility employees are eligible for EAP.

Continued on next page

Employee Assistance Program, continued

Practice

(True or False) The Employee Assistance Program is only for utility employees.

ANS: false

Prescription, OTC Drugs & Dietary Factors

Objective 4

State the effects prescription drugs, over-the-counter drugs, dietary factors (e.g., food products such as poppy seeds or hemp oil) may have on drug and alcohol test results

Need to Know

You should be aware that prescription and over-the-counter medication can impact chemical test results. Some food products such as poppy seeds and dietary supplements may also cause positive test results. If you show up positive, the MRO will ask what medicines and supplements you are taking.

You must inform your supervisor of the possible effects of the medication you are taking. All drugs must be in a properly labeled container. Non-prescription drugs must be in the original container.

Practice

It is OK to use products containing hemp, such as hemp cheese, since there is really no marijuana in it (TRUE or FALSE)?

ANS: FALSE, it can give a positive result on the drug test.

Roles & Responsibilities of Others

Objective 5

State the roles and responsibilities of the Medical Review Officer (MRO) and the Human Resources FFD and EAP staffs in the FFD program.

Need to Know: MRO

The Medical Review Officer is a licensed physician on contract with PG&E with knowledge of substance abuse disorders and chemical testing methods. The MRO will be the final medical authority in determining the positive result of FFD chemical testing.

The MRO is responsible for:

- reviewing and fully investigating all presumptive (probable) positive test results
- informing EAP and the Access/FFD Supervisor of confirmed positive test results
- recommending to EAP counselors the appropriate treatment program

Need to Know: FFD Group

The FFD group is responsible for setting down the procedures that clearly guide the supervisor through what could otherwise be a very complicated and difficult task. The FFD staff supervises the day to day operation of the Site Collection Facility, helping to deal with for-cause testing and medical evaluations.

Need to Know: Access Authorization

Access Authorization staff addresses the requirements and controls for psychological assessments that are required for site access, and the security force is there in case restraint or physical removal is needed.

Need to Know: Industrial Safety

The industrial safety program addresses control of the working environment to avoid adverse working conditions that could result in high stress levels.

In addition, we have already discussed the role of the MRO and the EAP in helping to supervise, evaluate, and respond to employees with behavioral problems due to substance abuse or a myriad of emotional, psychological, or physical problems. .

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Need to Know: HR	The Human Resource organization is to coordinate the personnel actions associated with violations of the FFD policies and review of behavioral concerns
Practice	The licensed physician who makes the final determination of a positive drug test is the A. Employee Assistance Officer B. Fitness for Duty Officer C. Behavioral Observation Officer D. Medical Review Officer ANS: D

Individual Roles & Responsibilities

Objective 6

State individual roles and responsibilities under the Access Authorization and Fitness-for-Duty program.

Need to Know

Individual Rights:

- All employees who test positive shall have the right to appeal the test results in writing and any resulting sanctions taken against them. The appeal must be in writing within seven (7) days of getting results from the MRO.
- Each employee has the right to privacy at the collection site unless the individual has previously violated FFD rules or there is reason to believe that the individual will tamper, alter, or substitute a specimen.
- Personal information collected for the FFD program will be protected and will not be disclosed except as required by the appropriate procedure.
- Individual Responsibilities:
- Discuss prescription medicines with your doctor and read OTC medicine labels so you may keep your supervisor informed of the possible effects of these substances on job performance.
- Contact the Security Watch Commander if you observe behavior from another employee or visitor that is inappropriate for working at a nuclear facility, or you suspect a violation of FFD policy.

Practice

If the drug screen comes back positive you have no right to appeal it. (TRUE or FALSE)?

ANS: False You can appeal the results in writing within 7 days of getting the results from the MRO.

Aberrant Behavior

Objective 7 Recognize indicators of or precursors to aberrant behavior and that behavior may change quickly

Introduction Part of the job description for all employees, is to always be alert to the behavior of those around them. You should report a pump that was malfunctioning and the same attitude needs to be applied when aberrant behavior is observed.

Need to Know Aberrant behavior is defined as "behavior not appropriate for working at a Nuclear Power facility".

Nice to Know Aberrant behavior is generally thought of as behavior that is "outside the norm" for the particular individual. Aberrant behavior is difficult to define concisely. What is normal for one person, or in one set of circumstances, might be aberrant for another. If you observe behavior is clearly not appropriate, you should report it to a supervisor or security.

Examples Wearing a ski mask might be appropriate when working outside at Prairie Island (in Minnesota) in January, but wearing one in warm weather is going to alarm security personnel. Doing this "as a joke" will raise serious questions about the employee's judgment, even if there are no FFD issues.

Practice Conduct not fitting with work in a nuclear power plant is termed:
A. Rude
B. Dubious
C. Normal
D. Aberrant

ANS: D

Recognize Illegal Drugs

Objective 8

Recognize illegal drugs and indications of the illegal use, sale or possession of drugs.

Introduction

Other than chemical testing, observation is the only other line of defense against the spread of substance. If we are to remain drug and alcohol free, your help is needed. Staying alert to our surroundings and our co-workers and dealing honestly with our observations is not only expected by the company, but is in the best interest of everyone involved.

Need to Know: Indications

There are degraded behaviors that can be general indicators of impairment from the use of illegal drugs or alcohol. They are:

- physical signs, such as stumbling, lack of coordination, or falling asleep
- appearance, such as red eyes, smell of alcohol, or excessive sweating
- attitude, such as threatening statements or combativeness
- There are specific indicators of substance abuse such as:
- finding drugs or drug paraphernalia
- seeing drug or alcohol use

Possession of illegal substances or alcohol on site can sometimes be recognized by furtive (i.e., sneaky) behavior such as groups of people gathering in secluded areas being very watchful of passersby, or by seeing money or substances or paraphernalia change hands. Such actions could indicate possession with intent to sell.

Recognize Illegal Drugs, continued

Nice to Know: Drugs

Learning to recognize the common drugs that are used in the area will be helpful. Look at:

- Marijuana
- Cocaine
- Opiates
- Phencyclidine ("Angel Dust")
- Alcohol
- Amphetamines

Observation as an Escort

You should now be able to recognize indications of aberrant behavior. When those indications are present in a visitor under your responsibility, you are to go to the nearest telephone and call Security

- If possible have the person accompany you to the telephone, if not, leave the person to go make the call.
- You are not required to put yourself in jeopardy. Just note all the facts surrounding the incident, call Security, and they will handle the individual.

If you are not an escort but recognize aberrant behavior in another employee that could lead to acts detrimental to the safety of personnel or the plant, you should notify both Security and that person's supervisor.

Practice

You see a group of three people meeting in an out of the way spot in the plant. You see money being passed and a roll of something. A pipe falls out of one person's coat pocket as the group rapidly breaks up when they see you. This could be a sign that there is an illegal drug transaction occurring. (TRUE or FALSE) ANS: True. These are **possible** signs of a drug transaction.

Detecting Performance Degradation

Objective 9

Describe BOP techniques for detecting performance degradation, impairment, or changes in individual behavior including work performance, social interactions, and personal health.

Introduction

The Behavioral Observation Program (BOP) is the primary means for determining continued trustworthiness and reliability of covered individuals. The techniques of behavioral observation are really just knowing what questions to ask yourself of the person under observation. The answers to these questions will reveal whether or not indicators of aberrant behavior or impairment are present.

Need to Know

During the observation / documentation phase, a supervisor will apply questions (see Examples) to the individuals' behavior pattern to help discern (figure out) the extent of change in the employee's behavior.

Examples

Some indicators that warrant a closer observation and evaluation include:

- absenteeism and abuse of time-off
- performance declines
- personal behavior changes
- performance and work efficiency
- physical signs or condition

Practice

The worker's supervisor will look at the worker's change in behavior and decline in performance to see if there is possible impairment present. (TRUE or FALSE) ANS: True

Behavioral Changes

Objective 10

Recognize behaviors adverse to the safe operation and security of the facility including an unusual interest in or predisposition towards security and/or involvement in operations activities outside the normal work activities' scope.

Introduction

Types of Behavior Changes seen that can lead toward security problems include:

- personal health
- social interaction
- work performance

Need to Know: Personal Health

Personal health changes can be seen in a person's physical appearance or emotional state:

- very emotional
- bizarre or unusual ideas
- shaking/twitching
- weight loss/gain
- sweating
- nausea/stomachaches
- frequent trips to the bathroom
- poor color, blue/gray around lips
- shortness of breath
- difficulty sleeping
- stumbling
- changes in grooming

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Need to Know: Social Interaction

Social Interaction Changes
Changes in how people interact with others can often reveal fitness-for-duty issues:

- avoids social contact
- holds grudges
- changes friends
- ignores co-workers
- complains frequently
- fights (verbal or physical)
- brags
- lies
- talks about suicide, disasters, hopelessness, etc.
- dominates conversations
- plays pranks
- displays sexually inappropriate behavior

Need to Know: Work Performance

Performance changes can be seen in a worker's quality, attention to detail, adherence to policies, and cooperation with co-workers:

- works much faster or more slowly
- makes more mistakes
- steals or damages property
- breaks or "bends" the rules
- forgets important things
- takes many or long breaks
- avoids part of the plant
- calls in sick frequently
- offers vague reasons for absence
- refuses to take direction
- refuses to give or receive help
- becomes overly cautious
- operates equipment carelessly

Practice

If you lie or steal, that will be seen as a behavioral change adverse to the safe operation of the plant. (TRUE or FALSE) ANS: True

Reporting FFD Concerns

Objective 11

State individual responsibility and process for handling and reporting behavioral problems and Fitness-for-Duty concerns

Introduction

Memory is fallible, especially over a long period of time. When dealing with an issue as important as this, the information must be accurate and complete.

Need to Know

Documenting behavioral problems is an essential element in long term observation so the cause of the problem can be addressed.

- It is important to the company and the employee for the supervisor to record the facts as they occur
- Accurate records lead to taking the appropriate actions and can be of use in the EAP problem-solving process
- Records are essential if disciplinary action becomes warranted

A referral to EAP is generally made by a supervisor or manager. To make a referral, the supervisor or manager would advise the employee that EAP services are available and suggest usage.

There are 2 types of supervisory referrals to EAP; an informal referral and a formal referral. When a formal supervisor referral is made, EAP personnel will advise the supervisor or manager if the employee contacted EAP. EAP participation is voluntary unless it is a condition of holding unescorted access. The manager or supervisor should contact EAP as well to discuss the issue(s).

Practice

During which type of supervisor referral to the Employee Assistance Program (EAP) will the supervisor be notified if the employee contacts the EAP?
A. Formal
B. Informal
C. Voluntary
D. Apparent

ANS: A

Supervisor's Role

Objective 12 State the supervisor's role and responsibilities under the Access Authorization and Fitness-for-Duty program.

Introduction Under the FFD program, the supervisor is expected to wear many hats and discharge many responsibilities. Understanding the perspective of supervision will help all of us better understand our roles and responsibilities regarding the FFD program.

Need to Know The FFD roles supervisors may play in implementing the FFD program are:
Observing employee behavior over time
Documenting behavioral problems
Acting to address behavioral problems.
Completing annual supervisory reviews for each individual with Unescorted Access Authorization
Supervisors of licensed operators have additional responsibilities outlined in procedures.

Practice Who fills out an annual FFD review for each individual with Unescorted Access Authorization?
A. The Individual himself
B. A peer
C. The MRO
D. His supervisor

ANS: D. His supervisor

Timely Removal

Objective 13

Describe the procedure for the timely removal of a potentially untrustworthy or unreliable person from the Protected Area

Introduction

Action must be taken to remove a worker's access to the protected area when a supervisor becomes aware of a change in the worker's behavior that could impact trustworthiness.

Need to Know

Supervisors who have reasonable grounds to suspect that any person under their direction is unfit for duty for any reason must:

- prohibit that person from working
- document the episode
- obtain corroboration
- follow any other indicated requirements of plant procedures
- have the person escorted out of the protected area by at least two people

Practice

If the supervisor has reasonable grounds to suspect that a worker under their supervision is unfit for duty, the supervisor must
A. call the NRC
B. have the person escorted out of the protected area by at least two people
C. take a photograph of the person immediately
D. restrain the person until Security arrives

ANS: B

Referral to EAP

Objective 14

State the individual's responsibility and process for referral to the Employee Assistance Program

Need to Know

Employees may

- request assistance from the EAP (self-referral)
- be referred by their supervisor or
- be referred by the company medical staff.

If the EAP staff determines that an individual's condition or actions pose or have posed an immediate hazard to the individual or to others, federal regulations require notification of company management even if the individual was self-referred.

Practice

If you refer yourself to the EAP and the EAP determines that you are an immediate hazard to someone at the plant, they cannot take any action because you are self-referred. (TRUE or FALSE) ANS: False

Reporting Legal Actions

Objective 15 Demonstrate understanding of the requirement to report all legal actions that could impact an individual's reliability and trustworthiness.

Introduction This requirement applies to ALL individuals with unescorted access or those individuals who have applied for unescorted access (i.e., signed a Personal History Questionnaire).

Need to Know Individuals shall report any legal action to their supervisor or the Access/FFD supervisor no later than the next working day after the legal action occurred and **BEFORE entering the protected area**. A supervisor, if notified about a worker's legal action, will inform the Access/FFD supervisor on the same day they are notified.

A legal action is considered any law enforcement or court action in which you are a defendant (e.g., charge, appearance ticket, summons, etc.) that requires a court appearance. This includes alcohol/drug related traffic offenses.

If you are unsure whether an incident is a legal action requiring notification, you should err on the side of caution and report it to your supervisor or the Access/FFD supervisor. Failure to report a legal action as required may result in suspension or revocation of unescorted access and disciplinary action or termination.

Example Speeding tickets do not usually constitute a legal action; however, some speeding tickets and moving violations can be written as misdemeanors (e.g., reckless driving). All misdemeanors constitute a legal action and therefore need to be reported.

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Practice / Feedback

You have had problems with withdrawal from a legally prescription pain reliever. A court has ordered you to go into a treatment program to avoid arrest. You say nothing of this to anyone. What can be the maximum sanction (penalty) under the NRC rule if your employer finds out?

A. Nothing, since it was a legal drug
B. One year of for cause testing
C. Nothing, since you were not arrested
D. Denial of access

ANS: D – Failure to report a legal action (including a mandated plan to avoid arrest on legal drugs) is grounds to deny access.

Fatigue – Symptoms & Decreased Alertness

Objective 16

State the symptoms of worker fatigue and contributors to decreased alertness in the workplace.

Need to Know: Symptoms

A fatigued worker exhibits the following behaviors all of which contribute negatively to safety and can lead to accidents in the plant:

- Willing to take risks
- More susceptible to errors of omission
- Less vigilant than usual
- Slow to respond
- Preoccupied with a single task
- Difficulty remembering events or procedures
- Trouble keeping their head up
- Slurred speech
- Unusually irritable
- Displays a "don't care" attitude
- Increased frequency of dropping objects
- Seems unaware of own poor performance
- Difficulty focusing, frequent blinking, or heavy eyelids

Need to Know: Contributors

Contributors to fatigue include:

- Lack of sleep & rest (quality, quantity and duration)
- Sleep disorders
- Psychological factors (stress, monotony, boredom)
- Health issues (diet, illness)
- Age
- Ingesting chemicals (caffeine, alcohol, medications)
- Shift work & work schedules
- Biological clock (Circadian phase)
- Staffing
- Environmental factors (temperature, noise, lighting)
- Workload

Nice to Know: Age

The amount and structure of sleep change profoundly over the life span. It is not that older people need less sleep, but it seems that our ability to get a good, continuous night's sleep decreases. These changes can be seen in people starting as early as age 50.

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Nice to Know: Alcohol

Alcohol can have a profound disruptive effect on restful sleep. A sleep-deprived individual who is already sleepy will demonstrate more severe performance and alertness impairment following alcohol consumption.

Nice to Know: High Risk Times

High risk times for fatigue include:
Midnight to 6AM
Early hours of day shift
First night shift after a break
First 2 to 3 hours of a shift or end of a shift

Practice

Your coworker seems to exhibit an "I don't care" attitude and keeps dropping things. He does not smell of alcohol and never has been a drug-taker to your knowledge. What could be wrong?

A. Nothing, he is just a normal person.
B. He could be fatigued.
C. He could be overdosing on energy drinks.
D. He could be mad at his boss

ANS: B, is the most probable.

Contributors to Fatigue

Objective 17

State the contributors to worker fatigue.

Need to Know

Fatigue can be caused by many factors:

- hard physical activity
- long work periods, commutes
- shift work
- changing or rotating work schedules
- lack of rest during work breaks
- sleep/work schedule that conflicts with normal body rhythms
- sleep disruption
- little exercise
- poor diet
- environmental conditions (high temperature, low light, background noise, etc.)

Tasks with the following characteristics are likely to contribute to decreased alertness and to increase worker fatigue:

- repetitive
- high demand for focus
- requirement to stay in one place or position for a long time
- limited social interaction

Take precautions when doing tasks like these.

Human Performance

Examples include taking frequent breaks to prevent fatigue and using human performance tools to prevent error.: self-checking and peer-checking.

Practice

You are working in a low light, high temperature environment. This could lead to you to become more fatigued than ever. (TRUE or FALSE) ANS: True

Circadian Variations

Objective 18	State the contributors to circadian variations in alertness and performance.
Introduction	Think of the word "circadian" as being made up of two words "circa" like circle and "dia" like day. That is what it means "the circle of the day."
Need to Know: Circadian Phase	"Circadian Variation" refers to what time it is according to the biological clock in your brain. Your brain programs your body to be awake during the day and asleep during the night.
Nice to Know	Disrupting the normal schedule can cause poor sleep quality, which can lead to fatigue. This often happens with workers on shift and night work.
Practice	According to the contributors to circadian variations in alertness, you are as likely to be alert in the night time as the day. (TRUE or FALSE) ANS: False. You are more likely to be alert in the daytime.

Shift Work Strategies

Objective 19 State shift work strategies for obtaining adequate rest.

Need to Know Preventive strategies are used before work and during rest periods. They address the physical causes of fatigue to minimize sleep loss. Here are a few examples:

- good sleep habits
- sufficient rest
- effective use of days off and rest periods
- proper consumption of food, alcohol, caffeine, and medications
- correct timing of exercise

These strategies can be especially helpful in preventing the sleep disruptions that are normally caused by shift and night work schedules.

Nice to Know Avoid using alcohol to sleep. Avoid caffeinated beverages just before bedtime.

Practice Since your body easily adapts to changing shifts in sleeping patterns, you can use your day off periods any way you want. (TRUE or FALSE) ANS: False. Use your days off and rest periods to adapt to changing shifts.

NRC Sanctions (Penalties)

Objective 20

State the NRC-mandated sanctions with regard to FFD program violations

Need to Know: Testing

Positive drug or alcohol test NRC sanctions (penalties) include:

- 1st positive- termination of access minimum 14 days
- 2nd positive -termination of access minimum 5 years
- 3rd positive - permanent loss of access

Any attempt to subvert the testing process (including refusal to give a sample) shall result in dismissal and permanent denial of access.

Need to Know: Additional Sanctions

There is a 5-year sanction if you are involved in the sale, use, or possession of illegal drugs or the **consumption of alcohol** in the Protected Area

There is also a 5 year sanction if you are likewise involved in the sale, use, or possession of illegal drugs or the **consumption of alcohol "while performing duties"** (even if not onsite) in the employment of the nuclear power plant.

Practice

Under the Fitness for Duty rules, possession of illegal drugs or consumption of alcohol only applies while you are onsite (TRUE or FALSE)?

ANS: False. Under the rules, the rules and sanctions now apply while performing duties (even if not onsite.)

Medical Review Officer

Objective 21 State the role of the Reviewing Official in the processing of FFD concerns

Introduction A medical laboratory analyzes FFD samples, but determination of the results is made by a doctor.

Need to Know The Medical Review Officer (MRO) is a licensed physician on contract with the utility with knowledge of substance abuse disorders and chemical testing methods. The MRO will be the final medical authority in determining the positive result of FFD chemical testing.

The MRO is responsible for:

- reviewing and fully investigating all presumptive (probable) positive test results
- informing EAP and the Access/FFD Supervisor of confirmed positive test results
- recommending to EAP counselors the appropriate treatment program

Nice to Know When the MRO receives a presumptive (probable) positive test result, he will contact the worker for an interview

Practice When the chemical lab results indicate that your test sample is positive, you are automatically found in violation of the Fitness for Duty rules. (TRUE or FALSE) ANS: False. The MRO schedules an interview with you and then determines if the test results are positive.

Sleep Disorders

Objective 22 State the indications and risk factors for common sleep disorders.

Need to Know The indications and risk factors for common sleep disorders such as sleep apnea (stopping breathing while sleeping) and insomnia (failure to get a good night's sleep) include:

- Stress
- Illness
- Diet (for example: caffeine and alcohol usage),
- Medications

Practice Sleep disorders such as insomnia and sleep apnea can be made worse by diet and illness. (TRUE or FALSE) ANS: True

Fatigue Countermeasures

Objective 23 State the effective use of fatigue countermeasures

Need to Know Countermeasures to fatigue include the following:

- Education on the effects of fatigue
- Assigned days off
- Consistent sleep times and meals times
- Work hour limits and rest requirements
- Social interaction
- Physical activities (stretching, isometric exercises, writing)
- Bright lights
- Short naps (15-25 min)
- Avoiding simple carbohydrates such as sugar-laden foods

Practice To counteract the effects of fatigue it is helpful to turn up the lights and do some stretches. (TRUE or FALSE) ANS: True

Individual Rights

Objective 24

State individual rights regarding the Access Authorization and Fitness-for-Duty program

Need to Know

Individual Rights:

- All employees who test positive shall have the right to appeal the test results in writing and any resulting sanctions taken against them. The appeal must be in writing within seven (7) days of getting results from the MRO.
- Each employee has the right to privacy at the collection site unless the individual has previously violated FFD rules or there is reason to believe that the individual will tamper, alter, or substitute a specimen.
- Personal information collected for the FFD program will be protected and will not be disclosed except as required by the appropriate procedure.

Practice

You have the right to privacy at the collection site unless you have previously violated the FFD rules or there is a reason to believe you will tamper with the specimen. (TRUE or FALSE) ANS: True

Adverse Effects of Non-Illegal Factors

Objective 25

State the potential adverse effects on job performance of prescription and over the-counter drugs, alcohol, dietary factors, illness, mental stress, and fatigue

Need to Know

Even though the following are not strictly illegal, they can cause impairment of job performance:

- prescription drugs
- over the-counter drugs,
- alcohol,
- dietary factors,
- illness,
- mental stress, and
- fatigue.

Nice to Know: Medicines

Discuss prescription medicines with your doctor and read OTC medicine labels so you may keep your supervisor informed of the possible effects of these substances on job performance.

Prescribed medicine and over-the-counter medication can affect your ability to do your job safely just as illegal drugs can. Read the warnings and discuss the matter with your supervisor or the access / FFD office when there is a possibility that medication will affect your performance at work.

Nice to Know: Sleep Medicines

There is no regulatory requirement that prohibits personnel from taking the properly prescribed sleep disorder drugs; however, these drugs can effect your behavior.

One drug cited in the FDA announcement had the following side-effects (taken from the manufacturer's web site): more outgoing or aggressive behavior than normal, confusion, strange behavior, agitation, and hallucinations.

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Nice to Know: Anti-smoking Drug	Chantix (varenicline), a drug prescribed to help people stop smoking, has been reported to cause an increase in aggression, suicide, accidents and injuries. If you are using this drug please contact your personal physician or the Medical Review Officer to evaluate continued use based on your particular work assignments.
Practice	Over the counter drugs are not a worry in regard to Fitness for Duty because they have all proven not to ever show up in the chemical test or cause impairment in job performance. (TRUE or FALSE) ANS: False, not only can they appear positive on a chemical test, they can also impair job performance.

STUDENT HANDOUT

PROTECTED AREA ACCESS AT DIABLO CANYON NUCLEAR POWER PLANT

Introduction

Lesson introduction

The lesson is site specific (Diablo Canyon) is to accompany the generic NANTeL lesson (GFFD100I/R).

- The students will know what the specifics are regarding work hours control as it applies to Diablo Canyon Power Plant.
- Passing on a Computer-Based Test is 80%

Objectives

Terminal objective

There are no tasks directly addressed in this site specific lesson guide.

Enabling objectives

The following objectives apply to the lesson.

Site Specific Objectives	
1	Identify the meaning of the terms "Covered Worker" and "Covered Work".
2	Identify the administrative work hour restrictions for non covered workers.
3	State the definition for the following terms. Maintenance Acute Fatigue Break Call-in Shift Cycle Directing Incidental Duties Non Incidental Duties
4	Identify the "basic" guidelines for work hour controls for Covered Personnel.
5	Identify what is considered "work hours" under the regulations.
6	State the "basic" guidelines for calculating work hours.
7	Identify the responsibilities and guidelines for waivers of work hour restrictions for "Covered Workers".
8	State the responsibilities for individuals, supervisors, and plant management under the fatigue management rules.
9	Identify circumstance that would require a fatigue assessment to be performed.
10	Identify human performance tools that can be used when filling out your timecard.
11	State your response if called out in an Emergency if you may be unfit for duty.
12	List the drugs tested for at PG&E's Diablo Canyon.
13	Demonstrate understanding of the requirement to report all legal actions that could impact an individual's reliability and trustworthiness.
14	Describe the procedure for the timely removal of a potentially

Site Specific Objectives

Covered Work & Covered Workers

Objective 1	Identify the meaning of the terms "Covered Worker" and "Covered Work".
Introduction	Throughout this course you will find many new terms and some tables that specifically identify work hour limits. **Be aware!** You don't need to memorize all the various limits. You should know the basic work hour limits and realize that the new time accounting software will warn you and identify when you are approaching one of the various work hour restrictions.
Need to Know: Covered Individual:	An individual subject to work hour controls defined in 10 CFR 26, Subpart I. A covered individual is any individual who is granted unescorted access to a nuclear power plant protected areas **and performs covered work.**
Need to know: What is Covered Work?	Basically you are performing COVERED WORK if you are performing duties as a/an Operator Chem & RP tech Security or Maintenance person on nuclear ("Maintenance Rule") systems

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Practice

AT DCPP how are we defining covered workers?

A. All personnel who come on site
B. All personnel who have a keycard or on site emergency response duties <u>and</u> PERFORM "COVERED WORK"
C. Only Operations, C&RP, Maintenance & Security
D. Only direct PG&E employees

Admin Work Hour Restrictions

Objective 2	Identify the administrative work hour restrictions for non covered workers.

Introduction

Why should I care?

Even if you've decided that you are a non-covered worker, these new regulations apply to you also. For example, if you are normally a non-covered worker and are moved to a position to do "Covered Work", then the plant must be able to look back at your documented time for the previous 6 weeks to ensure we will not be violating any of the "Covered Work" rules by allowing you to perform work.

So even if you do not perform "Covered Work", you will be required to document your time in our time accounting program following the same requirements for time documentation as "Covered Workers".

If you have to enter your time into the WorkForce ™ time accounting program, you will be provided with additional Web-Based Training on how to use the program.

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Need to Know: Administrative Time Restrictions for Non Covered Workers

PG&E expects that all employees come to work fit for duty; and to avoid fatigue in order to be able to safely perform their duties. All personnel with unescorted access at DCPP are subject to the requirements of 10CFR26.

Working long hours even when performing non-covered work will lead to fatigue just like when performing "covered work". For this reason, personnel performing non-covered work should remain within the same time restrictions as personnel performing "covered work".

Personnel performing or directing non-covered work who are entering their time in the Work Force software will NOT get a violation.

If you are approaching a fatigue work hour restriction, even though you are performing non-covered work, you should notify your supervisor.

Fatigue Management Rule guidelines that are exceeded for workers performing non-covered work will not require the generation of a plant Notification (a report that something is wrong) in SAP (the company information management system).

Specific Administrative Limits for Non-Covered Workers

Workers performing non-covered work will require written pre-approval from a Vice President prior to working more than 20 consecutive days and will require two consecutive days off prior to returning to work

Supervisors performing non-covered work will require written pre-approval from a vice president or the station director prior to exceeding 13 consecutive days worked.

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Need to know: Turnover Time	Normal turnover should not exceed 30 minutes Turnover time shall not exceed 2 hours per shift. The normal turnover time is a "should" statement, there may be situations that require a longer turnover period due to plant evolutions taking place during turnover.
Practice	If you are approaching a fatigue work hour restriction, even though you are performing non-covered work, who should you notify? **A. Your Supervisor** B. Only Managers C. Only Directors D. Director, Manager, or Shift Manager
Summary / Transition	Remember, even if you do not perform "covered work", you need to notify your supervisor if you are approaching any of the work hour restrictions required by the fatigue regulations.

Definitions

Objective 3	State the definition for the following terms. Maintenance Acute Fatigue Break Call-in Shift Cycle Directing Incidental Duties Non Incidental Duties

Introduction

Every new regulation brings new terms or redefines old terms. If you are going to understand the requirements for work hour restrictions and the new fatigue rule we will have to review some of these terms.

Need to know: Terminology

Maintenance:
For the purposes of 10 CFR 26, "maintenance" is defined as maintenance activities, repair, modification, or calibration that are intrusive to SSCs (Systems, Structures, or Components) and where errors could produce consequences to risk-significant SSCs.

Acute Fatigue:
Fatigue from causes (e.g., restricted sleep, sustained wakefulness, task demands) occurring within the past 24 hours.

Break:
An interval of time that falls between successive work periods, during which the individual does not perform any duties for the licensee other than one period of shift turnover at either the beginning or end of a shift, but not both.

Call-in:
Returning on-site due to licensee request when not normally scheduled for work.

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Need to know Terminology (continued)

Shift Cycle:
A series of consecutive work shifts and days off that is planned by the licensee to repeat regularly, thereby constituting a continuous shift schedule. A shift cycle cannot exceed six (6) weeks for the purposes of calculating minimum days off. Shift cycles can also be defined based upon not exceeding an average maximum hours per week (normally 54) during a 6 week non outage period.

Directing:
The exercise of control over a work activity by a worker who is directly involved in the execution of the work activity, and either:
Makes technical decisions for that activity without subsequent technical review
Is ultimately responsible for the correct performance of that work activity

Incidental Duties:
Work activities occasionally performed off site, including telephone calls and work required by the supervisor to be completed off site, that are required by the station but do not exceed a cumulative 30 minutes in a single break period.

Non Incidental Duties:
Work activities performed off site that are required by the station and exceed a cumulative 30 minutes in a single break period.

Practice

You are at home (not working) and you receive a phone call from the site that requires < 30 minutes to resolve. This would be considered a Non-Incidental Duty.

1. True
2. **False**

A break would be considered any time period where you are not performing "covered work".

A. True
B. **False**

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Summary / Transition	Now that we have a good handle on the new terms used by the rule we are ready to look at the work hour restrictions for work covered by the rule. Remember, these work hour restrictions for performing "covered work" will be more restrictive than our administrative time limit restrictions.

Basic Guidelines for Covered Personnel

Objective 4	Identify the "basic" guidelines for work hour controls for Covered Personnel.

Introduction

When reading this section of the lesson, be aware that no one expects you to memorize the work hour restrictions for the various work groups and work shift cycles. However, you should know the basic restrictions and pay particular attention to any of the shift cycles that pertain to your job.

Need to know: Basic Work Hour Restrictions for Covered Personnel:

The following limits apply to covered individuals regardless of unit status:

No more than 16 work hours in any 24-hour period

No more than 26 work hours in any 48-hour period

No more than 72 work hours in any 7-day period

At least a 10-hour break between successive work periods, or an 8-hour break when a break of less than 10 hours is necessary to accommodate a crew's scheduled transition between work schedules or shifts.

A 34-hour break in any 9-calendar day period (this limit may be incorporated into the following table of limits)

Need to know: Shift Cycles

A shift cycle shall not exceed 6 weeks for the purpose of calculating minimum days off. Shift cycles can also be defined based upon not exceeding an average maximum hours per week (normally 54) during a 6 week non outage period.

Each department should follow shift cycles as defined in their respective labor agreements.

An 8 hour shift schedule is a schedule that does not **average** more than nine (9) hours per workday over the entire shift cycle.

A 10 hour shift schedule is a schedule that **averages** more than 9 hours, but not more than 11 hours, per workday over the entire shift cycle.

A 12 hour shift schedule is a schedule that **averages** more than 11 hours, but not more than 12 hours, per workday over the entire shift cycle.

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Nice to know: Shift Cycles (Operational)	During online operations and without issuance of a waiver, a COVERED individual's required average minimum days off adhere to the following cycles: 8 Hr Days – 1 Day Off 10 Hr Days – 2 Days Off 12 Hr Days – See procedure OM14.ID1
Nice to know: Shift Cycles (Outage)	During outage operations and without issuance of a waiver, a COVERED individual who performs outage activities may apply the minimum day off requirements Maintenance (all shifts) – 1 Day Off per cycle Security (all shifts) – 4 Days Off Successive per cycle Others – See procedure OM14.ID1
Need to know: Evaluating Hours Worked	Hours worked should be evaluated to determine if any limit will be exceeded. You need to look at your work schedule based on a backward look at the number of hours that you have or will have been worked based on a time in the future (i.e., if the worker works at time T, how many hours will he or she have worked in the 24 hours/48 hours/7 days preceding that time) You should be checking work hour limits as well as minimum days off and break requirements.
Practice	Work restrictions for "covered work" are the same for both operational and outage conditions. A. True **B. False**

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Summary / Transition	It is your responsibility to check daily to ensure you will not be violating and work hour restrictions for both admin and covered work.

Work Hours

Objective 5	Identify what is considered "work hours" under the regulations.

Introduction

The new regulations provide specific guidance on what is considered to be work hours for the purposes of "covered work". It is important to document correct and appropriately on your time card your actual hours worked to ensure that you won't violate any of the new rules.

Need to know: Work Hours

Work Hours are defined as the amount of time an individual performs duties for DCPP. The following guidance shall be used for documenting your work time:

Sleeping is not allowed except on lunch breaks in designated areas only.

Performing work from home that takes less than 30 minutes is not considered work.

After hours study time during training weeks shall be excluded from work hour calculations

Personal time in which an individual is on-site but is off duty (i.e., before or after his/her normally scheduled work period in which work activities are not performed for the licensee) may be excluded.

Paid hours during which the individual is not expected to perform work (e.g., vacation time, sick days, personal leave) may be excluded.

Unscheduled work hours for the purpose of participating in an unannounced emergency preparedness exercises and drills may be excluded. During declared emergencies as defined by the site emergency plan, work hour limitations need not be met.

For the purposes of compliance with the minimum day off requirements, supervisors may exclude shifts worked by security personnel during actual conduct of force on force tactical exercises evaluated by the NRC when calculating worker's number of days off.

Practice

For the purpose of the regulations is reporting to the site for a plant emergency considered to be work hours?

A. Yes
B. No

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Summary

In order not to violate work hour restrictions, it is important that you document your work hours correctly. One of the key pieces of information to do this is your knowing what counts as work hours and what doesn't. Once you have a basic grasp of these rules, you're ready to learn how to calculate your work hours.

Calculating Work Hours

Objective 6	State the "basic" guidelines for calculating work hours.

Introduction

Work hour restrictions are designed to ensure workers performing "covered work" at DCPP are not doing so in a fatigued condition. Work hours performing non-covered work also contribute to fatigue. Therefore, both covered and non-covered work hours need to be considered when calculating your work hours.

This is also why workers that normally only perform non-covered work need to document their time correctly using the guidance provided in the regulations for workers performing "covered work".

Need to know: Calculating Work Hours

Our Work Force ™ software will calculate your time automatically. Work period start and stop times should be recorded and documented in a consistent manner. **This calculation includes both covered and non-covered work since the latter also contributes to fatigue.**

Hours worked while "working from home" (i.e., working the normal scheduled hours off-site) shall be reported to the cognizant supervisor upon returning on-site. The Cognizant supervisor will ensure any hours worked in excess of the schedule are included into the electronic tracking software. It is the individual's responsibility to be aware of work hour restrictions and not exceed without an approved waiver.

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Need to know: Calculating Work Hours (continued)	The calculated work hours shall include all time performing duties for work, including all within-shift break times and rest periods during which there are no reasonable opportunities or accommodations appropriate for restorative sleep. Work hours include but are not limited to: Shift holdovers to cover for late arrivals of incoming shift members, Early arrivals of individuals for licensee required meetings, training, or pre-shift briefings for special evolutions (these activities are not considered shift turnover activities), Holdovers or early arrivals for interviews needed for event investigations, and Call-in work periods. The time between leaving the station and the call-in work period are also included if that time is less than 10 hours in duration.
Standards	This is a good time to employ self-checking. There are many rules governing which hours to document. Stop and take a couple minutes when calculating your work hours and utilize self checking to ensure that you considered all the hours that should be used in calculating your work time.
Good Practice	Log you time at the BEGINNING of your shift to check that you are not creating a violation BEFORE you work the shift. Contact your supervisor if your time entry creates a red or yellow note.
Practice	Hours worked while "working from home" don't need to be considered when calculating work hours. A. True **B. False**

Responsibilities – Waivers for "Covered Workers"

Objective 7	Identify the responsibilities and guidelines for waivers of work hour restrictions for "Covered Workers".
Waivers (Introduction)	As a worker, supervisor, or manager you need to understand that waivers for "Covered Work" work hour restrictions will be extremely rare. DCPP takes seriously its commitment to the NRC rules and to monitoring employees fatigue, approving waivers will be done only in extreme situations.
Need to know: For Approvals	Contact your supervisor for a waiver if one is needed. Operations Shift Manager or Security Watch Commander or designated site senior-level manager is responsible for approvals In addition to Shift Managers and Watch Commanders, only the Vice Presidents, Station Director, and directors can approve (authorize) Fatigue Management Rule waivers.
Need to know: Fatigue Assessment	"Trained Assessors" can evaluate personnel for fatigue and request waivers for Fatigue Management Rules. At Diablo Canyon all FFD Supervisors are qualified to perform fatigue assessments for the purpose of requesting waivers.

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Nice to know: Waivers for Operational Occurrence

Operational occurrences may occur that result in on shift personnel working longer hours than scheduled. Examples of operational occurrences include:
Relieving the watch late
Delaying watch relief during plant transients
Using off going watchstanders to assist with urgent operational problems

The shift manager may grant authorization for on shift personnel to exceed key personnel overtime limits to address operational occurrences.
Refer to procedure OM14.ID1 for more information

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Nice to know: Unusual Occurrence

Unusual occurrences may occur that will result in personnel working longer hours than scheduled. These unusual occurrences are:

Responding to medical, fire, or hazardous material emergencies (this is not "covered work")

Decontaminating or processing through access control (this is not "covered work")

Taking a physical or FFD test after work hours (this is not "covered work")

Changing to or from Pacific Daylight Savings Time (1 hour)

Authorization to exceed overtime limits for unusual occurrences is not required.

Practice

Who can authorize “covered worker” waiver of work hours?

A. Any supervisor
B. The worker himself
C. Ops Shift Manager
D. No one since they are mandated

Summary

Remember, the NRC is serious about fatigue management and approving waivers will be done only in extreme situations. The group of designated individuals that approve (authorize) waivers is extremely small and your manager and supervisor cannot authorize waivers under the rule for covered workers.

Responsibilities – Individuals, Supervisor & Plant Management

Objective 8	State the responsibilities for individuals, supervisors, and plant management under the new fatigue management rules.
Introduction	Plant Management shall ensure that enough plant personnel are employed to maintain adequate shift coverage without routine use of overtime. It is the responsibility of both management as well as individual contributors to monitor fatigue and control work hours to ensure employees are fit-for-duty and not adversely affecting the health and safety of the public, station equipment, or themselves.
Need to know: Individual Responsibilities	Each individual is responsible for: Evaluating their own personal fitness-for-duty based on impairment from fatigue. Managing their work hours consistent with the objective of preventing impairment from fatigue. Verifying work hours are correctly documented regardless of whether they are paid for the hours worked. Making a self-declaration of fatigue when fatigue or reduced mental alertness could negatively affect the individual's job performance and reporting these concerns to supervision. Monitoring and reporting concerns related to individuals' Fitness-For-Duty (FFD) based on impairment from fatigue (i.e., Behavior Observation Program). Being aware of the total hours worked in the previous 14 days and notifying management if work hour limits will be exceeded if asked to work additional hours.

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Need to know: Supervisory Responsibilities	The cognizant supervisor is responsible for: Ensuring that no personnel exceed work hour limits without appropriate prior waiver authorization. Assessing each employee under their supervision for fatigue and mental alertness prior to an employee exceeding the work hour limit and performing risk-significant work. This shall be a face-to-face fatigue assessment. Assessing each employee under their supervision to reconfirm their mental alertness during the course of the work hour deviation period. This assessment is not documented. Initiating the Overtime Limit Waiver process, as appropriate.
Standards	This would probably be a good time to break out the 2 minute rule and apply it to our decision making at home. Should I stay up at night and watch that late movie? Should I go out clubbing with my friends on Friday night when I know I have to work on Saturday? The every day decisions we make about the use of our off time will have an impact on how fatigued we are when we show up for work the next day.
Practice	On a daily basis who is responsible for evaluating fitness-for-duty based on impairment from fatigue? **A. You, the employee** B. Your supervisor
Summary	Remember, each of us has the responsibility to show up for work fit for duty. This applies not only to drug and alcohol but also to being too fatigued to work safely and perform our work error free.

Fatigue Assessment

Objective 9	Identify circumstance that would require a fatigue assessment to be performed.
Fatigue Management (Introduction)	Fatigue management requirements are part of the FFD Program requirements and apply to all individuals (i.e., DCPP employees and contractors/vendors) who: Have unescorted access to protected areas (even if their current location is not on-site), or Are required to physically report to the Technical Support Center or an Emergency Operations Facility, in accordance with site Emergency Plans and procedures (only if their location is on site). The EOF requirement is not applicable to DCPP.
Need to know	Fatigue assessments shall be conducted under the conditions similar to drug & alcohol testing: **1. For cause** **2. Self declaration** **3. Post event** **4. Follow up** **5. Waiver – if waiving work hour rules, worker must be assessed** If a fatigue assessment was conducted for cause or in response to a self declaration, and the worker returns to duty following a break of less than 10 hours in duration, the worker shall be reassessed for fatigue as well as the need to implement controls and conditions before permitting the worker to resume performing any duties.

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Need to Know: Self Declaration Sanctions and Disciplinary Actions	Workers shall report to work fit for duty and on schedule. Persons who make choices that result in less than the sleep necessary for that person to remain alert and avoid fatigue are not meeting their obligation per this rule. Workers exhibiting chronic self declaration that they are not fit for duty as a result of fatigue should be considered for referral to the employee assistance program and may be subject to disciplinary action. Personnel subject to the fatigue assessments who refuse to be assessed shall be considered fatigued and unable to perform their duties. Time away from work for fatigue management recovery shall be classified as personal time off, if available, or non paid time.
Nice to know	It is important to understand that although every FFD Supervisor can perform a fatigue assessment for the purpose of requesting a waiver, there are only a few designated people who will be allowed to perform a post event fatigue assessment. The identified personnel at DCPP are the Shift Managers and the Security Watch Commanders.
Practice	A worker arrives at work with a strong smell of alcohol on his breath. Would a fatigue assessment still be required? A. Yes **B. No**

Human Performance Tools

Objective 10	Identify human performance tools that can be used when filling out your timecard.
Fatigue Management (Introduction)	The goal of our Error Prevention Tools Standards is to improve plant performance, reduce human error, and eliminate personnel injuries and plant events. Filling out your time card correctly is vital for the plant to stay in compliance with the federal regulations for controlling work.
Need to know	Tools that can be used in filling out your time card are: **Two Minute Rule** (since we will only be documenting time by exception, stop and think about your work day before making entries) **Self Checking** (after making entries, double check your time card) **Stop when unsure** (if you are confused about what to log on your time card, stop and ask your supervisor for assistance)
Practice	You do not need to use Human Performance tools when putting in your time for the day because the software will catch any errors. (TRUE or FALSE) ANS: False, no software will catch all the errors. Use the Two Minute Rule, Self-Checking, and Stop when unsure to ensure your time is entered correctly.

Emergency Call-Out

Objective 11	State your response if called out in an Emergency if you may be unfit for duty.

Need to Know: Call-Out

Emergency Call Outs: Individuals called out for unscheduled work (defined as less than 12 hours notice) are responsible for informing the caller if they are unfit for duty in any way. Individuals who are called out via the pager system or other automated system are responsible for informing the appropriate management group (e.g. outage management, operations, etc.) if they are unfit for duty.

When an individual advises he is not fit for duty, the individual will be directed not to report for the assignment and another individual will be called out.
When a called out individual arrives at the plant, they will proceed directly to the plant security building and complete a call out form. The call out form contains two questions:
Are you fit for duty?
Have you consumed alcohol within the past five hours?

Need to know: Responses

Depending on how these questions are answered, determines the subsequent actions:

"No" to question 1, the individual shall not be allowed to work. Security personnel will place the worker's access on temporary hold, notify the appropriate management personnel and direct the individual to wait at the security building for assistance.

If the individual answers "Yes" to question 1 and "No" to question 2, the individual may proceed directly to their assigned work location.

If the individual answers "Yes" to both questions, the individual will be required to undergo breath analysis before performing work. The on duty security watch commander or nuclear security sergeant can administer the breath test or notify the FFD staff to complete the breath test and will place the individual's access on temporary hold until the individual is determined to be fit for duty.

Emergency Call-Out, continued

Need to Know: Blood Alcohol

A positive Blood Alcohol Concentration (BAC) at DCPP is
0.04%,
0.03% when at work for at least one hour, and
0.02% when at work for at least two hours.
A determination of fitness is required when BAC is 0.01% and in work status at least three hours.

Drugs Tested For

Objective 12	List the drugs tested for at PG&E's Diablo Canyon.
Appeal & Privacy	You have the right: to appeal the test results in writing and any resulting sanctions taken against you. The appeal must be in writing within seven (7) days of getting results from the Medical Review Officer (MRO.) to privacy at the collection site unless you have previously violated FFD rules or there is reason to believe that you will tamper, alter, or substitute a specimen. to have your personal information collected for the FFD program protected and not be disclosed except as required by the appropriate procedure.
Need to Know: Drugs Tested	PG&E (Diablo Canyon) tests for the presence of the following Marijuana Cocaine Opiates Phencyclidine (PCP, "Angel Dust") Alcohol Amphetamines
Need to know: Medical Marijuana	Even though medical marijuana has been legalized in California, the NRC has ruled that the confirmed presence of marijuana in chemical testing renders the worker unfit for duty. Even if California initiatives were to legalize consumption of marijuana for everyone, that would not make nuclear workers exempt from testing for its presence and being excluded from working in nuclear power plants under present NRC rules.
Nice to know: Alcohol Energy Drinks	So-called "alcohol energy drinks" are malt beverages (average 12% alcohol) with caffeine added as a stimulant. They serve to keep party-goers awake while getting them drunk. These beverages can be very dangerous to those who drink them since they override the body's defense mechanism of passing out. **These drinks are marked on their cans as alcoholic beverages.**

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Drugs Tested For, continued

Practice	Since synthetic opium is an ingredient in many prescription pain reliever, Pacific Gas & Electric does not test for opiates. (TRUE or FALSE) ANS: False. If you are taking prescription pain relievers, let your supervisor know about this and any other thing that might lead to work limitations beforehand.

Reporting Legal Actions

Objective 13	Demonstrate understanding of the requirement to report all legal actions that could impact an individual's reliability and trustworthiness.

Introduction

This requirement applies to ALL individuals with unescorted access or those individuals who have applied for unescorted access (i.e., signed a Personal History Questionnaire).

Need to Know

YOU shall report any legal action to your supervisor or the Access/FFD supervisor no later than the next working day after the legal action occurred and **BEFORE entering the protected area**. A supervisor, if notified about a worker's legal action, will inform the Access/FFD supervisor on the same day they are notified.

A legal action is considered any law enforcement or court action in which you are a defendant (e.g., charge, appearance ticket, summons, etc.) that requires a court appearance. This includes alcohol/drug related traffic offenses.

If you are unsure whether an incident is a legal action requiring notification, you should err on the side of caution and report it to your supervisor or the Access/FFD supervisor. Failure to report a legal action as required may result in suspension or revocation of unescorted access and disciplinary action or termination.

Example

Speeding tickets do not usually constitute a legal action; however, some speeding tickets and moving violations can be written as misdemeanors (e.g., reckless driving). All misdemeanors constitute a legal action and therefore need to be reported.

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Practice

You have had problems with withdrawal from a legally prescription pain reliever. A court has ordered you to go into a treatment program to avoid arrest. You say nothing of this to anyone. What can be the maximum sanction (penalty) under the NRC rule if your employer finds out?

A. Nothing, since it was a legal drug
B. One year of for cause testing
C. Nothing, since you were not arrested
D. Denial of access

ANS: D – Failure to report a legal action (including a mandated plan to avoid arrest on legal drugs) is grounds to deny access.

Timely Removal

Objective 14	Describe the procedure for the timely removal of a potentially untrustworthy or unreliable person from the Protected Area
Introduction	Action must be taken to remove a worker's access to the protected area when a supervisor becomes aware of a change in the worker's behavior that could impact trustworthiness.
Need to Know	Supervisors who have reasonable grounds to suspect that any person under their direction is unfit for duty for any reason must: prohibit that person from working document the episode obtain corroboration follow any other indicated requirements of plant procedures have the person escorted out of the protected area by at least two people
Nice to Know	Remember that as a non-supervisor, you should report suspicious behavior but take no action beyond that.
Practice	If the supervisor has reasonable grounds to suspect that a worker under their supervision is unfit for duty, the supervisor must A. call the NRC B. have the person escorted out of the protected area by at least two people C. take a photograph of the person immediately D. restrain the person until Security arrives ANS: B