

ATTACHMENT 7

CHICAGO BRIDGE & IRON COMPANY

"JOB SPECIFIC SAFETY PLAN"

RECIRCULATION AND RHR PIPING REPLACEMENT

UNIT 11 DRYWELL

PEACH BOTTOM ATOMIC POWER STATION

MODS 1278 AND 1367

DEVELOPED

BY:

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CBI SAFETY

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1.0 INTRODUCTION

CBI's Safety Plan for the Unit 2 Drywell Recirculation and RHR Piping Replacement at the Peach Bottom Atomic Power Station (PBAPS) outlines Company policy, and reflects the basis of PECO's license with the NRC. Rules and requirements referenced in this plan are the policies of the Chicago Bridge and Iron Company and the Philadelphia Electric Company.

It is CBI's primary goal not only to produce a quality product on schedule, but also in the SAFEST way possible. CBI places major emphasis on completing this 350,000 manhour project without a lost time accident.

Hence, because of the increased safety hazards of work in a radiation environment, it is imperative that this plan be understood and implemented. Compliance with this policy by all employees is necessary, and can be accomplished only with a dedicated effort in educating the employee. This education is a responsibility shouldered by all CBI Supervision. For this reason CBI has developed a pre-job briefing for all new hired employees.

2.0 OUTLINE

TOPIC

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3.0 ENCLOSURES FOR REFERENCE

Below is a list of references used in formulating this safety plan for the Unit 2 Drywell Recirculation and RHR Piping Replacement at the Peach Bottom Atomic Power Station (PBAPS).

- 1.) 10CFR19 Notices, Instructions, and Reports to Workers; Inspections.
- 2.) 10CFR20 Standards for protection against radiation.
- 3.) 10CFR34 Licenses for radiography and radiation safety requirements for radiographic operations.
- 4.) PBAPS Procedure A-30 Plant Housekeeping Controls.
- 5.) PEAPS Procedure A-12 Ignition Source Control.
- 6.) PBAPS Procedure A-12.1 Controlling Tech Spec Firewatch and Firewatch Patrols.
- 7.) PBAPS Procedure A-12.2 Control of Combustibles.
- 8.) PBAPS HPO/CO7 Personnel Decontamination.
- 9.) PBAPS HPO/CO8 Tool and Equipment Decontamination.
- 10.) PBAPS HPO/CO3 Airborne Activity Survey Techniques.
- 11.) PBAPS HPO/CO9 Respiratory Protection Program.
- 12.) PBAPS HPO/CO9b Respiratory Protective Equipment Selection and Use.
- 13.) CBI Red Book Standards 155-1 thru 155-5-19.

4.0 SCOPE OF WORK

CBI was awarded the Contract to perform the following major replacements and modifications inside the Unit 2 Drywell at the Peach Bottom Atomic Power Station.

- 1.) Walk-down the recirc system and identify interferences to be removed or modified.
- 2.) Cut and Cap the N-1 and N-2 Nozzles for decontamination.
- 3.) Identify and remove ventilation duct and temporary supports.
- 4.) Remove Interferences.
- 5.) Remove snubbers, supports and whip restraints.
- 6.) Cut and remove elbows at N-1 and N-2 Nozzles.
- 7.) Remove suction line, discharge lines, inlet lines and manifold, cross-over valves, the RHR return lines and the RHR suction.
- 8.) Make final cuts, machine weld preps, counter bore-pumps/valves/nozzles.
- 9.) Install suction line, RHR suction, risers from the header to N-2 Nozzles, discharge line and install the RHR return line.
- 10.) Remove/Install RHR Head Spray Piping.
- 11.) Install snubbers, hangers and whip restraints.
- 12.) Replace all systems that have been removed.

5.0 PBAPS SAFETY AND SECURITY REQUIREMENTS

5.1 SECURITY

PBAPS 11/8/83, Page 2 of 2 Rev. 3 entitled Nuclear Plant Rules is the governing document for Chicago Bridge & Iron Company Employees while performing work at the Peach Bottom Atomic Power Station. (Attachment F.)

5.2 SAFETY

The Chicago Bridge & Iron Company is supportive of PBAPS's concern for good plant housekeeping, fire safeguards, and industrial and radiation safety.

Peach Bottom Atomic Power Station Procedures A-30 Plant Housekeeping Controls and PBAPS Procedures A-12, A-12.1 and A-12.2 Ignition Source, Firewatch and Combustible Controls - Administration Procedures are specific controls concerning plant safety.

CBI Jobsite Supervision will insure that the provisions of these controls are met - that CBI work areas in the plant, along with materials, tools and equipment are in a safe and orderly state as much as jobsite conditions permit, that smoking and tobacco chewing is done only in designated zones; that work areas are adequately LIT, ventilated and safe, and that proper and adequate firefighting equipment is located in the work areas.

CBI will be using the following gases in the drywell: acetylene, argon, carbon dioxide and nitrogen. Propane gas will not be allowed in the drywell, as it is heavier than air, and can pose an explosive hazard. Although, CBI will be using argon (which is also heavier than air) for welding purge, plasma gas, and for covering gas for tig welding and the automatic welding machines. Peach Bottom Atomic Power Station will provide the necessary ventilation throughout the job in the drywell. PBAPS will also be operating the chiller units in the drywell to help support the ventilation system. As an added precaution, CBI will set up an independent ventilation system to help extract the argon from the drywell. Because argon displaces the oxygen in the air, CBI will continuously monitor the drywell with two O₂ monitoring devices equipped for audible alarm. Since the gas we are mainly concerned with, (argon) is heavier than air, the two O₂ monitors will be placed at approximately 116' EL, at 180° apart; with a read placed outside the drywell on 135' EL. CBI will post notification at the drywell entrances stating that there is an O₂ monitoring system with audible alarm in use inside the drywell. With the readout

5.2 SAFETY Continued

outside the drywell, we will be able to be aware of the oxygen levels inside the drywell at all times without Physically being in a high radiation area. CBI Supervision will insure that these ventilation and cooling systems are working properly and are adequately venting any excess gases (i.e. argon CO₂), smoke fumes due to welding, grinding and other normal work activities. CBI will also use (2) 1000 CFM HEPA ventilation units for localized ventilation in the drywell for special cases (i.e. breaching, flapping etc.) to minimize airborne contamination.

PBAPS's Procedures HPO/CO 8 tool and equipment decontamination, HPO/CO 7 personnel decontamination, HPO/CO 3 airborne activity survey techniques, HPO/CO 9 respiratory protection program and HPO/CO 9b respiratory protective equipment selection and use, for welding burning, cutting and grinding are well defined and CBI will comply with them in its course of work at Peach Bottom. PECO can be assured that CBI will cooperate with its Health Physics Personnel to insure that these safety guides are met in the safest, easiest, and most practical manner.

Each CBI Shift Safety Supervisor will work closely with the CBI ALARA Staff and Health Physics Personnel to insure that RWP's are issued in a timely manner. This will be accomplished on an information basis allowing a close rapport between PECO and CBI Personnel.

6.0 SPECIFIC REQUIREMENTS FOR EACH EMPLOYEE

Prior to starting work for CBI inside of the plant, each employee will be required to complete the following in order to be allowed unescorted access into CBI's work areas:

- A.) Attend PBAPS's Rad Protection School, and successfully pass their written test prior to being issued a security badge.
- B.) Prior to being allowed to wear respiratory protection equipment, an employee must:
 - 1.) Attend PBAPS's Respiratory Protection Class and successfully pass their written test.
 - 2.) Successfully pass PBAPS's mask fit test, and loss of air drill.
 - 3.) Successfully pass a physical exam, which is provided at PBAPS's onsite medical facility.
- C.) Successfully complete a practice of protective clothing dressing procedure.
- D.) Present or complete an up-to-date NRC-4 Form with necessary backup documentation (NRC-5 Form) to PBAPS's Dosimetry Department.
- E.) Present proper documentation to PBAPS to demonstrate an individual's reliability for security clearance, by one of the following methods:
 - 1.) A documented check or "Good Guy Letter" from CBI (Including and indication of aberrant behavior, reasons for job terminations, etc.) for each individual, covering the past three years or more of employment.
 - 2.) A letter from the Local Business Agent, attesting to a union members reliability and responsibility for the past three years or more is sufficient for all craft personnel not working continuously with CBI.
 - 3.) For those employees with less than three years of employment with CBI or the Union, a complete background investigation of the individual, including a felony check with in the past five years must be conducted by an outside agency able to identify Aberrant behavior. CBI has contracted IRM Energy, Inc. to perform this investigation, and certifications for each individual will be forwarded to CBI.
- F.) Each Employee must receive a whole body count prior to starting work, and after completion of employment with CBI at PBAPS before he/she receives his/her final pay.

6.0 SPECIFIC REQUIREMENTS FOR EACH EMPLOYEE Continued

- 6.0 No individual will be allowed into a radiation area unless he/she has a minimum of 5 REM accumulative radiation exposure left in their bank account.

The following personal radiation monitoring devices will be issued to each employee, and shall be attached to the outside of the workers outer clothing in the chest area. The following will be supplied under the supervision of CBI Radiological Engineering (ALARA) and maintained by PBAPS as required by their license with the NRC.

- 1.) 1 - Self reader sodimeter (SRD). This monitoring device allows the employees to monitor his/her own exposure periodically while working in a radiation area. This SRD is also used by each employee to report his/her estimated daily dose exposure and the radiation work permit (RWP). These estimated exposures will then be inputted into CBI's computer for dose tracking purposes. This allows CBI's Safety and ALARA Department to keep a daily check on each individuals exposure.
- 2.) 1 - Harshaw "TLD" - This monitoring device is read daily by PBAPS using precise and highly automated equipment. By the use of a computer, each daily dose is examined, compared to its respective weekly, monthly, quarterly, annual and lifetime regulatory limits.
- 3.) 1 - Eberline "TLD" - This monitoring device is read on a monthly basis. This TLD Badge readout is the official recorded exposure for each employee while they are working at Peach Bottom Atomic Power Station.

Note: In addition to the above three monitoring devices, CBI's NDE Technicians will wear (1) CBI film badge, and (1) CBI Self Reader Dosimeter which will be controlled by CBI's own Safety Department. (Attachments D & E).

CBI will insure that all employees are wearing the proper RAD protection clothing as required by specific RWP's, at all times.

CBI will insure that calibrated survey meters (radiation detection instruments) with a sufficient number of backup units will be on the jobsite at all times, and the supervisory personnel are competent in their use. These survey meters will be utilized to monitor CBI's Radiography work. These instruments will be separate from those used by the Health Physics Technicians (HP's.)

Note: Aseparate instruction for radiography work has been developed with-in the ALARA Program Instruction # 2. (Attachment H)

6.0 SPECIFIC REQUIREMENTS FOR EACH EMPLOYEE Continued

PBAPS's allowable radiation dosage limits for this work are as follows.

- 1.) Maximum allowable per day is 300 MR.
- 2.) Maximum allowable per quarter is 2500 MR.
- 3.) Maximum allowable per year is 5000 MR.
- 4.) Exposers above 300 MR per day. Must have a dose extension request form prior to working in a high rad area.

Note: All daily, quarterly and yearly exposures by an individual will be monitored by CBI's Rad Engineering Group (ALARA).

A copy of radiation exposure data accumulated by PBAPS's on CBI Employees, showing the amount of exposure an individual received at this particular facility should be sent to each employee, CBI's Safety Supervisor, and to CBI's district office. With this effort CBI can update employees accumulated and historical exposure data.

6.1 CBI Pre-Job Safety and ALARA Briefing for new hires.

CBI has developed a pre-job safety and ALARA briefing for all new hired employees. Each employee is required to attend this briefing prior to doing any work for Chicago Bridge and Iron Company. This briefing is designed to inform new employees of the CBI Safety Program and relevant company policies. This briefing will also consist of an ALARA Briefing, to inform new employees on how the CBI ALARA Program will be implemented, radiation safety and ALARA (AS LOW AS IS REASONABLE ACHIEVABLE) will be stressed in this briefing.

7.0 FIREWATCH TRAINING

CBI has developed a firewatch training program, which every employee who will be assigned to firewatch must attend and successfully pass a written exam. The firewatch training program was designed with the use of the following plant procedures: PBAPS A-30 Plant Housekeeping Controls, A-12 Ignition Source Control, A-12.1 Controlling tech-spec Firewatch and firewatch patrols, and A-12.2 Control of Combustibles. CBI will implement these Procedures, and PECO can be assured that these Procedures will be followed.

CBI's shift safety supervisor will be responsible for training, and all firewatch personnel will be under the direction of CBI's on site Safety Department. The Firewatch Training Program consists of the following:

- I. Responsibilities (Firewatch).
- II. Location of Fire Equipment.
- III. Locations of Phones and PA Systems.
- IV. Locations of Exits (Drywell)
- V. Emergency Numbers and Instructions.
- VI. Log Book Used for Firewatch.
- VII. Inspection and logging of Fire Extinguishers.
- VIII. Identify and use of Fire Extinguishers.
- IX. Combustibles and Housekeeping.

(SEE ATTACHMENT G)

8.0 CBI PHYSICAL SAFETY POLICY

Chicago Bridge and Iron Company has a vital interest in the safety of all its personnel and stresses the attitude that safety is part of everyone's job. "Production with Safety" is company policy.

CBI operates on the basis that accidents are preventable and lays the responsibility for the control of accidents with field supervision. For the recirc and RHR piping replacement at the Peach Bottom Atomic Power Station, the major responsibility is shouldered by two (2) people: the CBI Shift Superintendent and the shift safety supervisor. These individuals will insure that the proper work procedures, safeguards and overall CBI and PBAPS Safety standards are upheld.

It is CBI's policy that no horseplay be tolerated; that the job-site be maintained in an orderly and neat manner; that the tools and equipment are in proper condition; that the proper and required safeguards are in place; that CBI employees wear safety hardware (safety glasses and hard hats), at all times while on the jobsite; and that a shift safety meeting is held at least once per week. (These items will be addressed in more detail under Item # 9.0 "Responsibilities of the Safety Supervisor".) In addition, each employee will be required to read, understand, and conform to the CBI's basic safety rules, and the special jobsite rules. (Copies Enclosed.) All Employees will be required to sign that they have received a copy of CBI's basic safety rules for field erection and construction and an orientation on its content. (Attachment B)

9.0 RESPONSIBILITIES OF THE CBI SAFETY SUPERVISOR

Due to the magnitude of the work scope at the Peach Bottom Atomic Power Station, CBI has assigned one full-time Safety Supervisor for each shift. This individual has no other assigned responsibilities other than those pertaining to safety.

Each Safety Supervisor has been formally trained and is knowledgeable in first aid. Some of his major responsibilities are:

- 1.) Insure that all PBAPS, CBI, OSHA and NRC Safety Regulations that apply are adhered to and followed.
- 2.) Serve as a liaison between PBAPS and CBI on all safety matters.
- 3.) Implement the CBI Jobsite Safety Program which includes weekly safety discussions with the entire crew.
- 4.) Insure that the jobsite housekeeping is in good order.
- 5.) Insure that tools, ladders, scaffolds, etc. are all constructed and used in a safe manner.
- 6.) Insure that fire extinguishers are inspected every 30 days, are readily available and accessible.
- 7.) Insure that all employees and visitors are wearing hard hats and approved safety glasses while in CBI's work area.
- 8.) Insure that lighting and ventilation are adequate and remain adequate in the work areas.
- 9.) Insure that CBI form GE 27, Revision May 78, "Safety Questionnaire" is filled out weekly. (Attachment C)
- 10.) Maintain constant communication with Regional Safety Director and Peach Bottom.
- 11.) Investigate and Report all accidents on the job.
- 12.) In addition to PBAPS's radiation exposure monitoring devices, CBI NDE Technicians will be required to wear a CBI film badge and dosimeter (See Section 6.0). The Safety Supervisor will be responsible to administer this requirement and see that appropriate records are maintained.
- 13.) Understand and be able to explain to the employees the fundamental parts of 10CFR19 and 10CFR20.

9.0 RESPONSIBILITIES OF THE CBI SAFETY SUPERVISOR

- 14.) Insure that CBI forms WL236, quarterly dosimeter report, and WL 238, radiation safety check list, are filled out properly. These forms will apply to CBI's NDE Technicians only.
- 15.) Insure that CBI's Safety Rules are followed while hydrostatic testing and radiography are being performed.
- 16.) Insure that all new employees are made aware of CBI's basic safety rules and the special jobsite rules, and that those rules are posted throughout the jobsite.
- 17.) The Peach Bottom Atomic Power Station has a cardox-halon system for fire protection in certain rooms around the plant. The Safety Supervisor must become familiar with where these systems are located and be assured that these rooms are totally sealed off from the CBI work areas. Listed below are the five separate cardox-halon system locations.
 - A.) High Pressure Coolant Injection Room (HPCI) there is one (1) Cardox-Halon System for each unit. Unit 2 & Unit 3.
 - B.) Computer cable spreading area. There also is one (1) Cardox-Halon System for each Unit (1) & (2).
 - C.) Diesel Generator Building (1) Common System.

9.1 Responsibilities of CBI ALARA Staff in Conjunction with CBI Safety Supervisor.

- 1.) Insure that each Employee is wearing the proper radiation monitoring devices.
- 2.) Assist the employees in complying with anti-contamination clothing requirements.
- 3.) Be aware of the local radiation levels in the work area and rotate employees from one area to another to minimize exposure and to insure that maximum allowable dose limits are not exceeded.
- 4.) Maintain computer dose tracking system, and review the radiation exposure record to help assure that no employee reaches the quarterly limit of 2500 MR and the daily limit of 300 MR as established by PBAPS and the NRC.
- 5.) Cooperate with PBAPS's Health Physics Department to the fullest extent possible.

9.1 Responsibilities of CBI ALARA Staff in Conjunction with CBI Safety Supervisor. Continued

- 6.) Insure that all employees understand the three (3) vital principles of minimizing radiation exposure (time, distance & shielding.) and maintain a constant and thorough watch around the jobsite for work areas that can be improved by utilizing these principles.

ATTACHMENT A

CBI'S SPECIAL JOBSITE RULES

1. Prior to employment, all employees must successfully pass PBAPS's radiation safety school, medical exam, mask fit and security clearance.
2. All employees must report for work clean shaven, as mask fits will be required. Whenever masks are required in the work areas, no beards will be allowed to be more than one day old.
3. All personnel referred from a Local Union Hall must bring with them a letter from their Business Manager to his trustworthiness ("Good Guy" Letter). All personnel who report without "Good Guy" Letters will be required to pass a psychological exam and successfully have a background investigation completed on them.
4. It would be appreciated if employees who require corrective lenses for working would report with a copy of their prescription to be used for their special "mask" eyeglasses.
5. It would be appreciated if employees would report to work with a copy of their previous radiation exposure history.
6. A whole body count must be made before starting work and before receiving final pay.
7. Workmen are allowed in designated work areas.
8. All CBI and PBAPS Safety Rules must be followed.
9. Willfull violation of radiation, safety and quality assurance rules or procedures will be cause for immediate dismissal.
10. All Employees must cooperate with PBAPS's Security and Rad Protection Personnel.
11. Leather work shoes must be worn during working hours.
12. No food is allowed in containment building.
13. No smoking, chewing gum, tobacco or snuff anywhere inside the containment building. In addition, smoking will be allowed only in approved smoking areas.
14. CBI is not responsible for valuables that are lost, stolen or contaminated. These types of items should be left at home or checked with your steward. Personal articles such as watches, rings, etc. that become contaminated must be left in the plant. If possible PBAPS will decon.

Employee's Signature: _____ Date: _____



SAFETY RULES FOR CONSTRUCTION

1. Safety headgear and eye protection must be worn at all times during working hours.
2. Double eye protection (Safety glasses with side shields and full face shield or Monogoggles) will be used in all chipping, grinding or power brushing operations.
3. Hearing protection must be used by all personnel when within 50 ft. of chipping, grinding, air arc gouging or any other high noise producing operations.
4. Employees must wear work gloves and long sleeve shirts while working.
5. Climb only by way of ladders, stairways or other safe means provided for this purpose.
6. No riders allowed on moving equipment, rigging or loads.
7. Only an approved type bosun's chair may be used. Safety belts and life lines shall be used in conjunction with the bosun chair.
8. Safety belts with lanyards connected to life line must be used by all personnel working on single and multipoint suspension scaffolds.
9. No one is permitted to work under or close to loads being hoisted.
10. Only an appointed signalman may transmit signals to the hoisting engineer.
11. All loose items must be secured against falling.
12. Guylines shall be flagged where interference with any normal operation can occur.
13. Dangerous openings in the structure must be fenced off and protection provided over manways.
14. All scaffold boards must be torted before use on each job and visually inspected each week. Ends must be banded, bolted or other means used to prevent splitting.
15. Double handlines must be used on all open sides. Ends of scaffolds shall be blocked off.
16. Safety belts with lanyards shall be used when no other form of protection from falling is available.
17. Minimum scaffold width requirements are two 12" or three 10" boards.
18. Bracket spacing must never exceed a maximum of 10' 6" when using Standard Scaffold Boards (T = 2"). Scaffold boards are to be kept against the handrail post on all scaffolds. The third handline will be installed at scaffold board level on all two board inside scaffolds to divide the open space between the scaffold and shell. The third handline is required on outside scaffolds when gap between shell and planks is more than 12 inches.
19. Bracket straps and lifting lugs are to be attached only by qualified welders, circled and initialed to confirm inspection by job supervision.
20. Scaffolds must be kept uncluttered and never overloaded. Brackets must be plumb and stationary loads are to be placed at bracket point. Secure bracket arms to stubs.
21. Equipment must never be used beyond rated capacities. Check capacity charts regularly.
22. All equipment, except diesel powered units, must be shut down for refueling.
23. Tools and equipment requiring guards shall not be used unless the required guards are in place.
24. All electrical equipment must be individually grounded, and all electrical distribution systems shall contain ground wiring throughout the system.
25. No one is to undertake equipment repairs unless specifically authorized to do so by the foreman.
26. All accidents regardless of severity are to be reported immediately to the foreman.
27. Good housekeeping must be maintained everywhere on the job site.
28. All lines shall be physically disconnected and blanked off from vessels on which hot work is being performed.
29. Unauthorized personnel are not permitted on the job site.
30. Horseplay will not be tolerated.
31. No CBI equipment will work nearer than 15' to a power line of 220 volts or higher. Lines which could accidentally be reached by equipment must be de-energized or otherwise made safe before any work is done.
32. Intoxicants are not permitted on the job site.



SAFETY QUESTIONNAIRE

Contract No. _____

Job Location _____ Type of Job _____ Foreman _____ Date of Visit _____ Your Name _____

Instructions: Place an (x) in the No ☐ provided only if condition requires action, and explain in "Remarks" section.
An (x) in the Yes ☐ indicates that the condition is satisfactory. Welding supervisor and foreman must inspect the jobsite together before filling out questionnaire.

GENERAL	Yes	No
1. OSHA sign posted?		
2. OSHA Form 200 up-to-date?		
3. Supervision aware of OSHA right of inspection?		
4. Certified First Aid man on job?		
5. All Noise Areas posted?		
6. Is good housekeeping maintained?		
7. Are weekly safety meetings held?		
8. Subcontractors aware of OSHA responsibilities?		
9. Protection over manways?		
10. Periodic explosimeter tests made where required?		
11. Pipelines disconnected/blanked off?		
12. Appropriate manuals and proper instructions on jobsite?		
13. Dangerous openings fenced off or covered?		
14. Test water to come through clean lines?		
15. Precautions taken to protect customer's property, employees and visitors?		

HEALTH AND ENVIRONMENT	Yes	No
16. Doctors, ambulance, fire department contacted & numbers posted?		
17. Approved and stocked First Aid Kit on job?		
18. Toilets adequate and maintained?		
19. Is ventilation adequate?		
20. Drinking water marked, paper cups supplied?		
21. Safety signs and tags properly used?		
22. Means provided for waste and scrap removal?		
23. Is air for cleaning being used properly?		
24. Are air hose sections wired together?		
25. Is illumination adequate?		
26. Is air receiver certified and equipped with pop-off safety valve and pressure gauge?		
27. Are new employees properly instructed about work hazards?		
28. Are Basic Safety Rules posted?		

PERSONAL PROTECTIVE EQUIPMENT	Yes	No
29. Are hard hats worn by all?		
30. Is eye protection worn by all?		
31. Is double eye protection used where needed?		
32. Are proper gloves worn by all?		
33. Is ear protection available - used?		
34. Are safety belts available - used?		
35. Are respirators available if needed?		
36. Safety line system installed and used while erecting cone roof framing and laying roof plates?		
37. Are lifelines used on floating scaffolds?		
38. Are burning goggles available - used?		

RIGGING	Yes	No
39. Adequate and safe condition?		
40. Slings proper size, safe condition?		
41. All hooks moused?		
42. Guylines marked where needed?		
43. Cable clips approved type?		
44. Cable clips properly installed/proper numbers?		
45. All plate clamps in safe working condition?		
46. Pole, derrick, sideboom or crane in safe working condition?		
47. Wire rope inspection within last 30 days?		
48. Capacity charts at operators station?		
49. Written tractor, crane, derrick inspection within last 30 days?		
50. Hand signal chart posted?		
51. Plate spreaders marked with capacity?		
52. 15 ft. clearance from power lines?		
53. Tail-Swing of crane barricaded?		
54. Signal man designated?		
55. All lifting lugs welded by qualified welders and circled by supervision?		

LADDERS AND SCAFFOLDS	Yes	No
56. Ladders in safe condition?		
57. Ladders properly tied off?		
58. Safety climb devices installed and used on all fixed ladders over 20'?		
59. Stairways have handrails?		
60. Tank scaffold properly erected?		
61. Scaffold boards: banded, tested, properly lapped?		
62. Brackets plumb?		
63. Bracket arms secured?		
64. Tool parts used?		
65. Bracket straps welded by qualified welders?		
66. Bracket straps circled after inspection by supervision?		
67. Third handlines installed where needed?		
68. Approved Boatswains chair on job?		
69. Tubular scaffold approved type (2" o.d.)?		
70. Tubular scaffold properly erected/ braced/guyed with access ladders?		
71. Floating scaffolds U.L. approved?		
72. Scaffolds erected and moved under qualified supervision?		
73. Handlines erected-tight-clamped off?		
74. Handlines erected on top angle or windgirders and structures?		
75. Are rolling scaffolds properly erected?		
76. Handlines at struts on elevated tanks?		
77. Approved scaffolds used at tower splices?		
78. Brackets inspected and in safe condition?		
79. Tool containers secured against falling?		

TOOLS AND EQUIPMENT	Yes	No
80. Are power tools properly guarded?		
81. Are welding leads in good repair?		
82. Barricade line installed under scaffold areas where work is being performed?		
83. Electrical equipment properly grounded?		
84. Electric service lines elevated or buried?		
85. Transformers fenced off or elevated?		
86. Gasoline operated equipment shut off for refueling?		
87. GFCIs installed and working on 110V Power Sources to hand held tools?		
88. Temporary lighting properly grounded, guarded, supported?		
89. Manways free from service cables and hoses?		
90. Are abrasive wheels properly handled/ stored?		
91. Excess flow valves in air lines?		
92. Defective equipment tagged and marked for warehouse?		

FIRE PROTECTION AND PREVENTION	Yes	No
93. Are Safety Cans used for flammables?		
94. Are flammable containers grounded - bonded?		
95. Fire extinguisher available at each work area? Have inspection tag?		
96. Welding areas clear of combustibles?		
97. Flash arrestors on burning torch?		
98. Safety shut-downs on stoves and preheaters lines?		
99. Gas and O ₂ cylinders stored upright - secured? Separated by 20 ft.?		
100. Gas manifolds marked and capped?		
101. Are fuels and flammables properly stored?		
102. Fire extinguishers in cab of sideboom crane, hoist?		

RADIATION	Yes	No
103. Radiation operators certified?		
104. Film badges and dosimeters worn by all X-Ray personnel?		
105. Survey meters used where required?		
106. Warning signs/lights installed?		
107. Radio-active source properly stored?		
108. All electric lines handled safely and grounded?		

REMARKS: (Were unsafe conditions corrected?) _____

Original: Local Construction Office
by: Foreman
by: Welding Supervisor Jobsite File

Foreman's Signature _____

Date _____



QUARTERLY DOSIMETER REPORT

LOCATION _____ DISTRICT _____

NAME _____ SOC. SECURITY NO. _____

DATE OF BIRTH _____ AGE _____ QUARTER _____ YEAR _____

DOSIMETER NO. _____ & _____

WEEKLY RADIATION EXPOSURE (WHOLE BODY) (mr)

PERIOD	WEEKS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
WEEK ENDING													
DOSIMETER													
SECOND DOSIMETER (IF USED)													

DAILY DOSIMETER READINGS (mr) (WHOLE BODY)

PERIOD 1981 FROM TO			DAYS							
			MON	TUES	WED	THURS	FRI	SAT	SUN	TOTAL
1	4-06	4-12								
2	4-13	4-19								
3	4-20	4-26								
4	4-27	5-03								
5	5-04	5-10								
6	5-11	5-17								
7	5-18	5-24								
8	5-25	5-31								
9	6-01	6-07								
10	6-08	6-14								
11	6-15	6-21								
12	6-22	6-28								
13	6-29	7-05								

REMARKS:

1. Employee must sign and date this form.
2. Must have one of these forms for each man in radiography.
3. Return this form at the end of the contract, quarterly or at the time the employee leaves the job, whichever comes first.



RADIATION SAFETY CHECK LIST

Contract No.			Location City State	Radiographer	Safety Supervisor Reporting	Date
Isotope	X-ray	Both		Foreman		

	Yes	No
1. Do Survey meters have up-to-date calibration certificate?		
a. Is meter checked periodically against camera?		
2. Are warning lights being used?		
3. Does job have adequate supply of signs?		
a. "High Radiation Area" (minimum 2)		
b. "Radiation Area" (minimum 8)		
c. "Radioactive Material" (minimum 4)		
4. Does job have sufficient barrier tape or rope?		
5. Are signs and rope being used?		
6. Does job have sufficient dosimeters and a charger?		
7. Are dosimeter calibrations up-to-date?		
8. Are dosimeters being used?		
9. Are film badges being used?		
a. Left in X-ray shack at end of shift?		
10. Is camera kept in locked compartment when not in use?		
11. Is locked storage compartment, posted with "Radioactive Material" sign?		
12. Is "Notice to Employees" form posted?		
13. Has job been visited by NRC or State Inspector? When?		
a. Were they satisfied with safety program?		
b. If not, are the violations posted?		
14. Has radiographer explained radiation safety to the other men on the job? (Use of rope, signs, etc.)		
15. Has radiographic crew held the required safety meetings at least every three months?		
16. Is there a copy of the NRC or State License Registration as applicable on the job site at all times?		
17. Did Safety Supervisor review 16 with Radiographer?		
18. Is a copy of the "Operating and Emergency Procedures" available at the job site?		
19. Does job have any unusual conditions that may require attention? If yes, list in "Remarks" below.		
Remarks:		
Distribution: Original - Construction Office Copy - Corp. Safety/Gen. Welding - Houston Copy - Radiographer		
This has been reviewed by: _____ Foreman or Chief Radiographer		

DEDICATED FIRE

I. RESPONSIBILITIES

A. Position

1. Fire

2. Fire

3. Fire

4. Fire

5. Fire

6. Fire

7. Fire

8. Fire

9. Fire

10. Fire

11. Fire

12. Fire

13. Fire

14. Fire

15. Fire

16. Fire

17. Fire

18. Fire

19. Fire

20. Fire

21. Fire

22. Fire

23. Fire

24. Fire

25. Fire

26. Fire

27. Fire

28. Fire

29. Fire

30. Fire

31. Fire

32. Fire

33. Fire

34. Fire

35. Fire

36. Fire

37. Fire

38. Fire

39. Fire

40. Fire

41. Fire

42. Fire

43. Fire

44. Fire

45. Fire

46. Fire

47. Fire

48. Fire

49. Fire

50. Fire

Department.

procedure.
FIRE or EMERGENCY.
with the portable
immediately do so.

Page 1 of 1

by those applied.

Source and
Area

road and area
Safety.

and be

II. LOCATION

A. Fire

B. Fire

III. LOCATION

A. Fire

B. Fire

IV. LOCATION

A. Fire

B. Fire

DEDICATED FIRE WATCH BRIEFING
RECIRCULATING AND RHR PIPING REPLACEMENT
PEACH BOTTOM UNIT II DRYWELL

DEDICATED FIRE WATCH CONTINUED

V. EMERGENCY NUMBERS AND INSTRUCTIONS

- A. Medical:
- 1.) Should a situation arise that requires EMERGENCY FIRST AID, notify Shift Supervision (Ext. 4220, 4221, 4222), or use PA System.
 - a.) Give location and problem.
 - b.) On PA System Shift Super will announce: Medical Emergency, First Aid Team required. Give location and problem. (REPEAT TWICE.)
 - c.) If unable to contract Shift Supervisor then proceed with the PA System announcement.
- B. Fire:
- 1.) Should any situation arise where fire watch or any other personnel detects fire or smoke, pull the nearest FIRE ALARM BOX, or Notify Shift Supervision (Ext. 4220, 4221, 4222.) or use PA System.
- C. In any type of Emergency situation, time is critical. Report the problem immediately.
- D. In both cases - MEDICAL AND FIRE notify CBI Safety Supervisor on PA System immediately after Shift Supervisor has been contacted. Again give location and problem.
- E. The fire watch shall notify his Foreman and Safety Department of any changed conditions in the drywell ie. (The accumulation of appreciable trash or combustibles.)
- 1.) Ensure that the use of the Ignition Source is terminated until the condition is corrected, or a new Appendix A is obtained or approved. (A-12 Page 1 of 1 Appendix B Item 7.)
- F. In case of FIRE - If obviously extenguishable with the portable fire extinguisher(s), or other quick action, immediately do so.
- 1.) In all cases, immediately notify Shift Super (Ext. 4220, 4221, 4222 or Page).
 - 2.) Actuate closest fire alarm pull box. (A-12 Page 1 of 1 Appendix B Item 8.)
 - 3.) If not easily extinguishable, evaluate area.
- G. Know the location of the following.
- 1.) Phone
 - 2.) Page and Public Address System (PA)
 - 3.) Fire fighting equipment
 - 4.) Fire alarm pull box
 - a.) The preceeding are listed on the Ingnition Source Control check list. (A-12 page 1 of 1 Appendix B Dedicated Fire Watch Instructions) Item 9.
- H. If A-12 has been void by Shift Supervisor do to Fire Problem
- 1.) Safety supervisor must have A-12 Ignition Source Procedure Appendix A reinstated before work can continue.
 - 2.) Problem area must be cleaned up.

DEDICATED FIRE WATCH BRIEFING
RECIRCULATING AND RHR PIPING REPLACEMENT
PEACH BOTTOM UNIT II DRYWELL

DEDICATED FIRE WATCH CONTINUED

V. EMERGENCY NUMBERS AND INSTRUCTIONS (CONTINUED)

- I. Constant surveillance for at least 30 minutes after last Ignition Source or Emergency to be sure of no reoccurrence.
 - 1.) Good housekeeping is a preventative measure in keeping emergencies from happening.

VI. LOG BOOK USED FOR FIRE WATCH

- A. Start of each shift.
 - 1.) Fire watch will pick up log book at Safety Department.
 - 2.) All personnel assigned to fire watch must have the dedicated fire watch briefing.
 - 3.) All fire watch personnel must sign and date the A-12 prior to entering assigned area.
 - 4.) All fire watch must sign CBI Firewatch Log.
 - 5.) All fire watch relief and turnover must be done at the work area assigned, in order to maintain continuous surveillance.
- B. End of each shift
 - 1.) Fire watch will remain on duty 30 minutes after last ignition.
 - 2.) Log out on A-12 and CBI Log.
 - 3.) Make a complete survey of assigned area
 - 4.) Ensure that there is no smoke or smoldering fires.
 - 5.) Return CBI Fire Watch Log to Safety Department at end of each shift.

VII. INSPECTION AND LOGGING OF FIRE EXTINGUISHERS

- A. Inspect all extinguishers in assigned area daily.
 - 1.) Remove and replace any that have been extinguished.
 - 2.) Know the locations of the fire extinguishers in your assigned area.
- B. Inspect all extinguishers every 30 days.
 - 1.) Update inspection tags.
 - 2.) Log in CBI Inspection Log Book.
 - a.) Extinguisher number and date must be logged.
 - b.) Log removal and replacement extinguisher numbers in inspection log book.

(Compliance of the preceeding is of vital importance to maintain a ready situation in the event of an emergency.)

DEDICATED FIRE WATCH BRIEFING
RECIRCULATING AND RHR PIPING REPLACEMENT
PEACH BOTTOM UNIT II DRYWELL

DEDICATED FIRE WATCH CONTINUED

VIII. IDENTIFY AND USE OF FIRE EXTINGUISHERS

A. Fire Prevention Principles.

- 1.) Every job shall have at least two fire extinguishers fully charged and easily accessible. Larger jobs may require additional fire extinguishers.
- 2.) Fire is one of the most frequent hazards in industry/construction. Major considerations must be given to the potential of fires.
 - a.) Protection of personnel.
 - b.) Protection of property.

B. Classifications of Fires:

- 1.) Class A Fires: Involve ordinary combustibles, such as wood, paper and textiles where quenching cooling effect is required to extinguish.
- 2.) Class B Fires: Involve flammable liquids and gases, such as oil, gasoline, paint and grease, where oxygen exclusion or flame interrupting is essential to extinguish.
- 3.) Class C Fires: Involve electrical wiring and equipment, where the the dielectric nonconductivity of the extinguishing agent is of utmost importance.
 - a.) Example: Water Solution extinguishers must not be used on Class C fires.

C. Cause of Combustion:

- 1.) There are three factors necessary for combustion.
 - a.) Fuel in the form of a vapor
 - b.) Oxygen (Air)
 - c.) Sufficient heat - to raise a combustible material to its ignition temperature.
- 2.) All three of these factors must be present to have a fire. It is not the actual substance which is consumed by the flame; it is the vapor of the substance in combination with the oxygen in the air.
 - a.) Example: A piece of wood held in a flame will not catch fire until it has been heated to the point where vapor is given off. High volatile products, such as gasoline, which vaporize at ordinary temperatures and pressures, present a serious fire hazard.

D. Spontaneous Combustion:

- 1.) Because of slow oxidation, heat is produced in certain combustibles that contain oils or greases. If the heat is not dissipated as rapidly as it is generated, the temperature of the material will rise. Eventually the material reaches its ignition point and ignites.

WATER DRIFTING

REPLACEMENT

BY WELLS

WATER DRIFTING

WATER DRIFTING

(continued)

must be dry before use if moisture
the cement can harden and not
the nozzle.

handle.

When on charging
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When
invert the
lever to
the hose.

moisture
and not

large
and not
results
action, from
fire and work
lighting

oxygen
use;
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DEDICATED FIRE WATCH BRIEFING
RECIRCULATING AND RHR PIPING REPLACEMENT
PEACH BOTTOM UNIT II DRYWELL

DEDICATED FIRE WATCH CONTINUED

VIII. IDENTIFY AND USE OF FIRE EXTINGUISHERS

F. Type and Operation of Extinguishers (continued)

2.) Summary of Extinguisher Use and Placement:

- a.) Crane Cabs: One 5BC rated extinguisher mounted in each.
- b.) Office and change shacks: One 20BC rated unit within 75 feet.
- c.) Generator with fuel storage tank: One 20BC rated unit within 75 feet.
- d.) Gasoline weld units with fuel storage tank: One 20BC rated unit within 75 feet.
- e.) Inside of Tank: One 20BC rated unit.
- f.) Paint and thinner storage: One 20BC rated unit within 25 - 75 feet.
- g.) Point of use-mixing: One 20BC rated unit within 75 feet.
- h.) Compressor refueling: One 20EC rated unit within 75 feet.
- i.) In the immediate vicinity on all scaffold levels where work is taking place: One 20BC rated unit.

NOTE: Jobs such as large spheres, containment vessels, turnarounds and other special work, require the construction office to formulate special plans for selection and use of extinguishers and also placement of the extinguishers so that they will be immediately available in the work areas.

3.) Inspection and Maintenance:

- a.) Monthly inspection of fire extinguisher will be made to insure they are in their designated places and to insure they have not been actuated or tampered with, and to detect any obvious physical damage or other impairments.

Inspection tag attached to units shall be initialed and dated monthly or monthly inspection records may be maintained in foreman's office file.

- b.) Annual maintenance shall include a thorough examination of mechanical parts, extinguishing agent and the expelling means maintenance tag shall be attached to extinguisher including month and year of maintenance, and identity of person performing the service.

DEDICATED FIRE WATCH BRIEFING
RECIRCULATING AND RHR PIPING REPLACEMENT
PEACH BOTTOM UNIT II DRYWELL

DEDICATED FIRE WATCH

IX. COMBUSTIBLES AND HOUSEKEEPING

A. Combustibles Commonly Found in the Plant.

- 1.) Wood Products (untreated) ie. pallets, crates and packing material.
- 2.) Paper Products (forms, towels, packing materials.)
- 3.) Cotton gloves
- 4.) White coveralls (yellow coveralls are fire treated.)
- 5.) Tape (masking, duct)
- 6.) Steel Wool
- 7.) Nylon or manilla rope
- 8.) Sweeping compound
- 9.) Respirators and canisters
- 10.) Massin wipes, oily clothes, rags
- 11.) HEPA Filters
- 12.) Resins

B. Housekeeping (Plant Housekeeping Controls A-30)

1.) Cleanliness

The work areas shall be kept sufficiently clean and orderly so that plant activities can proceed in an efficient manner. Where large accumulations of materials occur on a nonroutine basis, do to the nature of the work, the material shall be promptly removed or stored neatly. This shall be done at the end of each shift and at the end of each job.

Garbage, trash, scrap, litter, oil spills, and other excess materials shall be collected, removed from the work site, or disposed of. Such excess material shall not be allowed to accumulate and create conditions that will adversely affect quality. These accumulations shall be removed prior to the end of each shift. The disposal of cleaning chemicals shall be accomplished so that additional hazards are not created at the disposal site. Pressurized gas bottles shall be returned to the designated storage facility adjacent to the east wall of the Administration Bldg. When no longer required for service.

DEDICATED FIRE WATCH BRIEFING
RECIRCULATING AND RHR PIPING REPLACEMENT
PEACH BOTTOM UNIT II DRYWELL

DEDICATED FIRE WATCH

IX. COMBUSTIBLES AND HOUSEKEEPING

B. Housekeeping (Plant Housekeeping Controls A-30) CONTINUED

2.) Decontamination:

It is the policy of the station to maintain area surface contamination as low as practicable so as to reduce personnel radiation exposure, improve plant accessibility, and enhance overall work productivity. Portions of the plant that have become contaminated as a result of plant activities or upsets shall be reported by Shift and H.P. Supervision to the Engineer-Maintenance who shall determine the priority for decontamination.

3.) Control of Plant Site Area:

Physical areas for specific activities such as refuse and garbage dumps, refuse burning sites, storage locations, parking lots, non-smoking areas, contractor work areas, eating areas, and waste collection container locations shall be designed and controlled as appropriate, by plant supervision.

4.) Vital Housekeeping Areas:

The following areas listed are designated as vital housekeeping areas. Personnel are to refrain from storing flammable material in these areas, unless this material is stored in a fire resistant container.

- | | |
|----------------------------------|--------------------------|
| a.) Main Control Rooms | g.) Drywell |
| b.) Battery Rooms | h.) Cable Spreading Room |
| c.) Diesel Generator Rooms | i.) Recombiner Building |
| d.) Electrical Switch Gear Rooms | j.) Fire Towers |
| e.) Oil Storage Rooms | k.) Hose Cart Houses |
| f.) Reactor Building | l.) Fire Hydrants |

Additionally all personnel are encouraged to INITIATE request for "Assistance with Housekeeping Forms" as defined in the procedure to prevent the accumulation of unnecessary combustibles in these areas.

5.) Smoking Areas:

Personnel are permitted to smoke only in designated areas as determined by Plant Management. Smoking is not permitted in areas not specifically designed as smoking areas.

DEDICATED FIRE WATCH BRIEFING
RECIRCULATING AND RHR FIPTAD REPLACEMENT
PEACH BOTTOM UNIT II DRYWELL

DEDICATED FIRE WATCH

IX. COMBUSTIBLES AND HOUSEKEEPING

B. Housekeeping (Plant Housekeeping Controls A-30) CONTINUED

6.) Work Environment

Areas of activity shall be adequately cleaned, lighted, ventilated, protected, and accessible, as appropriate for the work being performed. Temporary lighting may be utilized but shall be installed and maintained to provide good visibility. Ventilation shall be provided where necessary to prevent accumulation of dust, noxious fumes, and temperature extremes. Adequate working space for personnel shall be provided using proper work stages and platforms having accessibility by stair or ladders. Barriers, screens, shields, restricted access, or other protection shall be provided as necessary for isolation of areas where noise, welding arcs, dust, inclement weather, or other conditions exist that affect the quality of work being performed.

7.) Maintenance of Fire Fighting Capabilities:

Activities affecting fire protection and designed responsibilities for performance of these activities shall be conducted in accordance with the "Peach Bottom Fire Protection Plan." The storage of equipment and material shall not impede accessibility to fire fighting equipment, fire suppression equipment, ALARA Stations, fire towers, structure exits, and operability of fire doors. All fire doors and water tight doors shall be maintained closed except when required to accommodate the movement of personnel or equipment. Additionally, during adverse weather conditions (e.g. snow, ice, or buildup of snow and ice), that all hose cart houses and fire hydrants on site be sufficiently cleared of any accumulation that might hinder ready access. The designated operating shift personnel responsible for area inspections shall correct or report any violations with the above requirements.

DEDICATED FIRE WATCH BRIEFING
RECIRCULATING AND RHR PIPING REPLACEMENT
PEACH BOTTOM UNIT II DRYWELL



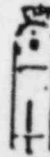


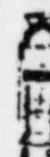



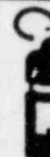

DEFINITIONS: (Control of Combustibles A-12.2)

- 1.) **COMBUSTIBLE:** A substance that will react with oxygen, if ignited, and burn. A combustible can be in the form of a solid, liquid, or gas.
- 2.) **FLAMMABLE:** A Combustible substance that ignites very easily, burns intensely, or has a rapid rate of flame spread. A flammable may be in the form of a solid, liquid, or gas.
- 3.) **FLASH POINT:** The minimum temperature at which a liquid gives off vapor sufficient to create an ignitable mixture.
- 4.) **FLAMMABLE/COMBUSTIBLE LIQUID CLASSIFICATIONS:**

The classification of a liquid as flammable or combustible depends upon its flash point. The following list is a general summary of these classifications:

 - a.) Flammable Liquids: Liquids with a flash point below 100°F. These liquids are divided into Class IA, IB, or IC, depending on their boiling point and flash point.
 - b.) Combustible Liquids: Liquids with a flash point above 100°F these liquids are divided further into Classes:
 - 1.) Class II: Liquid with flash point greater than 100°F and less than 140°F.
 - 2.) Class IIIA: Liquid with flash point greater than 140°F and less than 200°F.
 - 3.) Class IIIB: Liquids with flash point greater than 200°F.

KNOW YOUR FIRE EXTINGUISHERS

	WATER TYPE				FOAM	CARBON DIOXIDE	DRY CHEMICAL			
										
CLASS A FIRES WOOD, PAPER, TRASH, RUBBER, CLOTHING, ETC.	YES	YES	YES	YES	YES	NO	NO	NO	YES	YES
CLASS B FIRES FLAMMABLE LIQUIDS, GASES, OIL, GREASE, ETC.	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
CLASS C FIRES ELECTRICAL EQUIPMENT	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES
CLASS D FIRES COMBUSTIBLE METALS	SPECIAL EXTINGUISHING AGENTS APPROVED BY RECOGNIZED TESTING LABORATORIES									
METHOD OF OPERATION	PULL PIN, SQUEEZE HANDLE	PULL UP/SHOULDER DOWN AND SHOOT	PUMP HANDLE	PUMP UP/SHOULDER DOWN	PUMP UP/SHOULDER DOWN	PULL PIN, SQUEEZE LEVER	PULL PIN, SQUEEZE LEVER	PULL PIN, SQUEEZE HANDLE	PULL PIN, SQUEEZE HANDLE	PULL PIN, SQUEEZE LEVER
RANGE	3' - 40'	3' - 40'	3' - 40'	3' - 40'	30 - 40'	3 - 8'	3' - 30'	3' - 30'	3' - 30'	3' - 30'

YOUR RESPONSIBILITY

Do not hang your extinguisher and forget it. Like any appliance it requires care. Keep it clean. Look at the gauge every month to make sure it has pressure in it (the needle will point straight up if it is full). Never fill it yourself nor try to fix it yourself. If it is dented or begins to rust have it checked immediately. Take it back where you bought it or call a fire extinguisher service company (look in the Yellow Pages of your phone book under "Fire Extinguishers").

The nameplate also contains operating instructions, cautions and maintenance instructions. Read it carefully and understand it thoroughly before a fire occurs.

Review the nameplate and this manual with everyone who might ever need to use this extinguisher.

IMPORTANT NOTICE TO BOAT OWNERS

If you are going to hang this extinguisher in your boat, be sure you read the nameplate carefully. Near the words "Underwriters Laboratories, Inc." the nameplate says what bracket you must hang it in. The Coast Guard insists that it be mounted in the correct matching bracket, a substitute is illegal. Make certain your extinguisher and bracket meet Coast Guard regulations.

Owners Manual Pg14
Rev. 5/78
Printed in U.S.A.

YOUR FIRE EXTINGUISHER

LETTER
SYMBOL

TYPES OF FIRES

PICTURE
SYMBOL



FOR WOOD, PAPER, CLOTH,
TRASH AND OTHER ORDINARY
MATERIALS.



FOR GASOLINE, GREASE, OIL,
PAINT AND OTHER FLAMMABLE
LIQUIDS.



FOR LIVE ELECTRICAL
EQUIPMENT.



Use your extinguisher only on the types
of fires designated by the letters and symbols
shown above and on the nameplate.

Hang your extinguisher on the wall 3½ to 5 feet above the floor and near a doorway. Do not hang it where you would have to walk through a possible fire to get it.

Do not hang in an extremely hot or cold place; the nameplate (label) on the extinguisher tells you the exact temperature it can withstand. Never throw it in a fire, it may explode.

Keep it out of reach of small children.

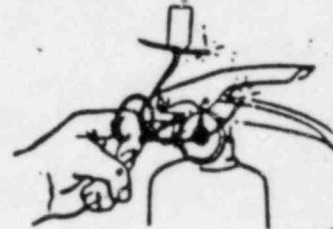
OPERATION

1 Your extinguisher is pressurized when you buy it. Do not test it or use even a small amount of its contents unless you have it recharged or replaced immediately. Even a small amount of discharge will cause it to lose pressure and it will not work again until it is recharged.

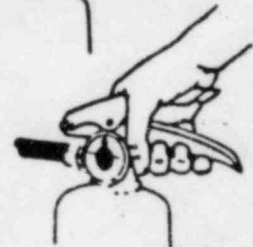
IN CASE OF FIRE
CALL THE FIRE DEPARTMENT FIRST
THEN USE YOUR EXTINGUISHER.

1 Hold it right side up. Pull the pin and get within 8 to 10 feet of the fire before you 2 squeeze the handles together. It will discharge for only 10 or 15 seconds so be careful. 3 Aim at the bottom of the fire (not the flame), using a side to side motion sweep across the width of the fire, not up and down.

1. HOLD UPRIGHT -- PULL PIN (TO SNAP WIRE SEAL) PAGE 4 OF 8

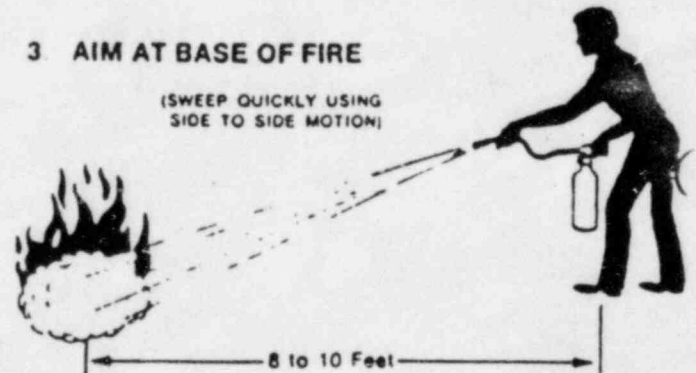


2. SQUEEZE LEVER



3. AIM AT BASE OF FIRE

(SWEEP QUICKLY USING
SIDE TO SIDE MOTION)



APPENDIX A - IGNITION SOURCE CONTROL CHECK LIST

. Attach to MAF when job is completed
. In case of fire, phone shift (Ext 4220, 4221, 4222 or Page)
. Post at job during ignition source use (if/kw if contm. area)

1. DESCRIPTION

- a. MRF No. _____ b. Ignition Source(s) _____
- c. Plant Location _____
- d. Job Description _____
- e. Nearest Phone and PA Handset Location _____
- f. Work Group Fire Extinguisher Type _____ (Not installed plant extinguisher)
- g. Nearest PEAPS Portable Fire Extinguishers Type _____ Qty _____ Location _____
- h. Nearest Manual Fire Alarm Pull Box Type _____ Qty _____ Location _____
- i. Nearest Fire Hose Station _____
- j. Worker Name/Date (PRINT) _____

Completed by Worker:

2. MAJOR HAZARDS

- a. Ventilation: Adequate _____ Supplemental Ventilation Installed _____
b. Explosive Atmosphere Present Yes _____ No _____
c. Ignition Source Used on or Adjacent to Flammable Liquid Tanks Yes _____ No _____
d. Ignition Source Used on or Adjacent to Flammable Liquid Pipes Yes _____ No _____
e. Remarks (Describe Precautions, Measures Taken if b, c, or d are checked Yes)

Completed by: Work Supervisor

3. PRECAUTIONS

4. Precautions listed on reverse side are all met (Checked 'Yes' or 'N/A') _____
b. One or more Precaution is Checked 'No' _____
c. Work Supervisor Name/Date (PRINT) _____

4. APPROVAL

- a. Approval is not to be granted if any MAJOR HAZARD in Part 2 is checked 'Yes' and REMARKS do not indicate that adequate precautionary measures have been taken such as issuance of a SAFETY PERMIT.
- b. Fire Detection/Suppression Systems which are Inop. _____
- c. Fire Watches Required (Indicate number in the blanks)
(1) Dedicated (No. based on PRECAUTIONS) _____ APPENDIX B required and completed _____
(2) Tech Spec Fire Watch (T.S. 3.14) _____ APPENDIX B required and completed _____
Procedure A-12.1 requirements met _____
- d. Remarks _____
- e. Shift Supervision Approval Signature/Date _____

Completed By
Shift Supervisor

5. SIGN IN LIST

I have read the above and understand the hazards, precautions and fire watch requirements
 Work Group or Contractor Title _____

[illegible]

- .Continue Firewatch for 30 minutes after use of ignition source to detect possible smoldering fires.
- .Attach additional paper for logging in, if necessary.
- .Attach to MRF when job is completed.

SIGN IN LIST

I have read the above and understand the hazards, precautions and fire watch requirements
Work Group or Contractor Title

Work Supervisor once/24 hour revalidation
Inspection (PRINT name, date, time

Ignition Source
Workers (PRINT name and date)

Fire Watch (PRINT name, date, time)

[illegible]

- Continue Firewatch for 30 minutes after use of ignition source to detect possible smoldering fires.
- Attach additional paper for logging in, if necessary.
- Attach to MRF when job is completed.

APPENDIX B - DEDICATED FIREWATCH INSTRUCTIONS

Post at job adjacent to associated ignition source control check list.
Attach to MRF when job is completed.

MRF NO. _____ Work group or contractor title _____

1. The portable fire extinguisher shall be within about 15 feet of the firewatch. The firewatch shall understand and be capable of using the portable fire extinguisher. As required, he should read the instructions on the portable fire extinguisher and may refer to Appendix D, Portable Fire Extinguisher Operation
2. Areas within about 20 feet (about 10 paces) of the ignition source shall be inspected.
3. If an ignition source is being used on a structure, the opposite side of the structure shall be inspected.
4. If a floor or wall opening, or grating is located within about 35 feet of the ignition source, the adjacent or lower area shall be inspected.
5. The firewatch shall have no other job related duties.
6. If an ignition source is used in a contaminated area, firewatch(es) shall suit up as necessary to ensure that the areas of concern are protected from ignition. The portable extinguisher may be enclosed in plastic, provided that rapid use is possible.
7. The firewatch shall notify the lead worker of any "Changed Conditions" (particularly the accumulation of appreciable trash or combustibles) and ensure that the use of the ignition source is terminated until the condition is corrected, or a new Appendix A is obtained and approved.
8. IN CASE OF FIRE - If obviously extinguishable with the portable fire extinguisher(s), or other quick action, immediately do so. In all cases immediately notify shift (ext. 4220, 4221, 4222 or page), and actuate closest fire alarm pull box.
9. Know the location of nearest phone, page, fire fighting equipment, and fire alarm pull box. They are listed on the Ignition Source Control Check list.
10. The above instructions apply during and for 30 minutes following the use of an ignition source.

SIGN-IN LIST

I have read the above and understand the Firewatch Instructions
(Attach additional paper for logging in, if required.)

FIREWATCH POSTED (First Watch) FIREWATCH TERMINATED (Last Watch)

Print Name/Date

Print Name/Date

Firewatchers (Print Name/Date)

_____ / _____	_____ / _____	_____ / _____
_____ / _____	_____ / _____	_____ / _____
_____ / _____	_____ / _____	_____ / _____
_____ / _____	_____ / _____	_____ / _____
_____ / _____	_____ / _____	_____ / _____

ALARA PROGRAM INSTRUCTION #2		INSTRUCTION API #2
		REV. NO. 0
TITLE	SPECIFIC PROGRAM INSTRUCTION FOR MAINTAINING OCCUPATIONAL EXPOSURE TO RADIATION AS LOW AS IS REASONABLY ACHIEVABLE (ALARA)	CONTRACT 34540
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VIII. RADIOGRAPHY OPERATIONS

A. Reference

1. "Safety And Control Of Radioactive Nuclides During Their Use Within The Philadelphia Electric Company System", Safety Department 1978.
2. "Isotope Radiation Safety Manual" CBI April 20, 1982 Rev. 0.

RESPONSIBILITIES

1. CBI shall endeavor to schedule radiography during break periods and between shifts. Routine radiography will not be performed during active work periods.
2. CBI will brief HP on areas to be radiographed
3. HP will verify that unauthorized personnel are signed out of Torus Proper and Drywell RWP's.
4. All RWP's for Torus Proper and Drywell will be under control of the HP in charge of the Drywell.
5. HP will issue job specific RWP for radiography.
6. CBI will post access points to the Drywell and Torus Proper. HP will verify all access points are properly posted.
7. CBI will provide personnel to guard all access points to the Drywell and Torus Proper during radiography to prevent inadvertent entry by un-authorized personnel.
8. CBI will notify the Control Room of intent to perform radiography. CBI will verbally announce notice of radiography to plant personnel via the Plant P.A. System prior to and after radiography.

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VIII. RADIOLOGY OPERATIONS Continued

REQUIREMENTS (Continued)

9. CBI will remove all warning signs and warning lights at the completion of radiography. HP will verify.
10. Upon completion of radiography, the radiographer shall notify HP to do a dose rate survey of the radiographic device prior to storage of device.

Note: The Health Physics Technician should perform a release survey of film packets as soon as possible once the radiography is complete.
11. When not in use the radiographic device or devices will be stored in a metal lockable container controlled by the radiographer as specified in 10CFR34. HP and CBI will ensure container is properly posted.
12. CBI shall provide the names and phone numbers of the responsible CBI personnel who should be contacted in the event of an emergency.
13. CBI shall supply the PECO responsible person a copy of applicable emergency procedures.
14. CBI shall provide individuals qualified in accordance with 10CFR34 for all job functions involving the use of any radiography unit.
15. CBI shall provide documentation of calibration of survey instruments to PECO Department representative upon request.
16. CBI shall provide upon request of PECO representative proof of compliance with applicable regulations, including a copy of any governmental license(s).

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RADIOGRAPHIC ACTIVITIES IN UNIT 2 DRYWELL

A "Radiography Check Off List" will be used for all radiographic work done in Drywell.

-- EXAMPLE --

1. An RWP specifically for and limited to radiography work in Drywell has been issued and is ready for use at the Drywell Control Point.

HP / Time / Date

2. Verify that the Drywell is clear of all personnel and all RWP's for work, inspection etc. are under the control of the HP in charge at the Drywell Control Point. Control Point HP verify that all RWP sign in sheets are clear and everyone is signed out.

HP / Time / Date

3. Notify Control Room @ 4221 or 4222.

CBI / Time / Date

4. Notify HP Office @ 4262 or 4263

CBI / Time / Date

5. ALL access points to the Drywell and Torus Proper are posted.

Radiographer / Time / Date

6. Announce over Page System "Radiography will begin in the Unit 2 Drywell in 5 minutes".

CBI / Time / Date

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RADIOGRAPHIC ACTIVITIES IN UNIT 2 DRYWELL (Continued)

7. When finished, announce over Page System "Radiography in Unit 2 Drywell is complete".

CBI / / Time / Date

8. Remove postings, turn in RWP to HP at Control Point.

Radiographer / / Time / Date

9. Notify Control Room, Radiography is complete @ 4221 or 4222.
10. Notify HP Office, Radiography is complete at 4262 or 4263.

CBI / / Time / Date

Note: This form shall remain with the RWP.

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VIII. RADIOGRAPHY OPERATIONS Continued

EMERGENCY INSTRUCTION:

"ACCIDENT" and "EMERGENCY" as defined in "ISOTOPE RADIATION SAFETY MANUAL" section 5 Emergency Procedures. CBI Manual 4-20-83 Rev. 0.

Action to be taken by radiographer and his assistant in the event that an accident occurs which causes the following to exist:

1. Loss of the radiography source in the work area.
2. Damage to the radiography device resulting in the inability to retract the source.
3. Any other condition resulting in loss of control of the source.

The Radiographer and His Assistant shall exit the Drywell and immediately notify the HP at the Drywell Control Point that an emergency exists in the Drywell, and explain the exact nature of the problem. The HP will notify his Supervisor and the Control Room. All barriers will be surveyed by HP and the Radiographer, barriers will be adjusted as required. The Radiographer and His Assistant will sign-out on the Specific RWP. The HP will take possession of the RWP. CBI personnel will continue to guard all access points to the Drywell and Torus Proper. The Drywell and Torus will become an "Exclusion Area" with all access denied until the following is done; a meeting with the Radiographer, a CBI Radiological Engineer and CBI Safety Rep. and at least one PECO Health Physics Supervisor. The purpose of the meeting is to determine the magnitude of the problem and generate instructions to correct the problem, to include an ALARA Review, and a specific RWP for recovery. Radiography for acceptance inspection will be performed outside the protected area. If a problem occurs, the Radiographer should follow this Emergency Instruction.

NAME _____

SS# _____

DEDICATED FIREWATCH BRIEFING

"QUIZ"

RECIRC. AND RHR PIPING REPLACEMENT

PEACH BOTTOM ATOMIC POWER STATION
UNIT II DRYWELL

1. It is your responsibility to remove all trash while on Firewatch Duty.

TRUE - FALSE

2. Protection of Personnel and Property are the two major considerations that must be given to the potential of fires.

TRUE - FALSE

3. If the ignition source control checklist is not signed by a welder working on that job, it is acceptable if he is signed in on another checklist.

TRUE - FALSE

4. What are the three factors necessary for combustion?

1.)

2.)

3.)

5. Give the three classes of fires and an example of each.

1.)

2.)

3.)

6. Which of the following fire extinguishers should not be used under any circumstances?

- A.) Dry Chemical
- B.) Carbon tetrachloride
- C.) Carbon Dioxide
- D.) All of the above
- E.) None of the above

7. How often should all fire extinguishers be inspected and logged.

- A.) Once per week
- B.) Once every 6 months
- C.) Every 30 days
- D.) Once a year