

TANK FARM SURVEILLANCE AND OPERATIONS ON-THE-JOB TRAINING CHECKLIST

TITLE AND TRAINING VERIFICATION SHEET

TITLE: DRYWELL AND LATERAL MONITORING

COURSE NUMBER: 0632 CHECKLIST NUMBER: 092867

NAME: _____ PAYROLL: _____
(PRINT)

TRAINING VERIFICATION:

THE ABOVE NAMED EMPLOYEE HAS DEMONSTRATED HIS/HER COMPETENCY IN THE PROFORMANCE AND KNOWLEDGE REQUIREMENTS FOR THIS JOB UNDER NORMAL AND ABNORMAL CONDITIONS HAVING MET ALL TRAINING REQUIREMENTS, THE EMPLOYEE IS NOW ELIGIBLE FOR: (CHECK ONE)

CERTIFICATION: _____ RECERTIFICATION: _____ YTD EXPERIENCE: _____

QUALIFICATION: _____ REQUALIFICATION: _____ YTD EXPERIENCE: _____

EMPLOYEE: _____

EMPLOYEE'S
MANAGER: _____



DOCUMENT STUDY CHECKLIST

COURSE TITLE: DRYWELL AND LATERAL MONITORING

COURSE No. 0632

CHECKLIST No. 101088

NAME: _____ PAYROLL No. _____

REFERENCE DOCUMENT TITLE	DOCUMENT No.	DATE
Tank Farm Safety Rules	As Posted	_____
Industrial Safety Manual	WHC-CM-4-3	_____
GEN-O (Radiation Protection)	WHC-CM-4-15	_____
Radiation Work Permits (RWP)	WHC-CM-4-15	_____
Tank Farm Operations	F-1	_____
Drywell Readings - Leak Testing Using Neutron Source	F-14	_____
Waste Storage Tank and Leak Detection Criteria	SD-WM-TI-356/VOL 1&2 SD-WM-TI-357/Summary	_____
Criteria for Filling Out Data Log Sheets	WHC-CM-5-7, 2.4	_____
Criteria for Requesting or Removing Information Labels	WHC-CM-5-7, 2.5	_____

Employee's Signature: _____ Date: _____
(Employee's signature denotes completion of study of the referenced documents.)

DOCUMENT STUDY CHECKLIST

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REFERENCE DOCUMENT TITLE	DOCUMENT No.	DATE
Operating Procedures:		
Swab Radiation Readings in Pipeline Encasement Risers, Leak Detection Drywells, and InTank LCWs	TO-020-070	_____
Leak Detection Lateral Monitoring for Lateral Caissons 241-SX-1 and 3, and A Farm	TO-040-120	_____
Lateral Monitoring Operation for TK-108-SX, 109-SX, 112-SX, 114-SX, and 115-SX	TO-040-140	_____
Drywell Surveillance Van Operating Procedure	TO-040-330	_____

Employee's Signature: _____ Date: _____
(Employee's signature denotes completion of study of the referenced documents.)

ON-THE-JOB SKILLS CHECKLIST
TITLE AND TRAINING VERIFICATION SHEET

TITLE: DRYWELL AND LATERAL MONITORING

COURSE No. 0632

CHECKLIST No. 092887

NAME: _____ PAYROLL No. _____
(PRINT)

Training Verification:

The above named employee has demonstrated competency in the performance and knowledge requirements necessary for this job under normal and abnormal conditions. Having met all training requirements the employee is now eligible for: (check one)

CERTIFICATION: _____ RECERTIFICATION: _____ YTD EXPERIENCE: _____

QUALIFICATION: _____ REQUALIFICATION: _____ YTD EXPERIENCE: _____

EMPLOYEE: _____ / _____
(SIGNATURE) (DATE)

EMPLOYEE'S
MANAGER: _____ / _____
(SIGNATURE) (DATE)

TECHNICAL
INSTRUCTOR: _____ / _____
(SIGNATURE) (DATE)

OJT CHECKLIST

INSTRUCTIONS

OJT TRAINER:

The OJT Trainer is that person selected to instruct the trainee. The OJT Trainer will be certified in the course being taught and will have completed a course in OJT Instruction.

When the OJT Trainer determines the operator has shown competency in performing a specific activity and is ready for evaluation, the OJT Trainer will sign and date the activity(s) labeled OJT TRAINER and DATE on the OJT Checklist. Notification shall be given to the OJT evaluator upon completion of all OJT training activities.

OJT EVALUATOR:

The OJT Evaluator will be certified in the course being evaluated and will have completed the OJT Instructor course. The OJT Evaluator and Trainer should not be the same person.

When evaluating the performance of a trainee, the Evaluator shall, if tank farm conditions allow, require the trainee to perform the activity being evaluated. The Evaluator shall only circle the appropriate Evaluation Code, when shown, such as P and S to indicate whether the trainee performed or simulated the specific activity. When evaluation is completed, the Evaluator shall sign and date the lines labeled OJT EVALUATOR and DATE.

OJT Checklists will be completed 100% satisfactorily, or will not be signed off as completed.

Once the entire OJT Checklist is completed, forward the document to the Training Specialist assigned to your facility. Your Training Specialist will process this document, along with required exams or other checklists, to qualify or certify the trainee.

OJT TRAINEE:

Once the OJT Checklist has been completed in its entirety, and all other required signatures are in place, sign and date the cover sheet in the space labeled EMPLOYEE.

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ACTIVITY	REFERENCE DOCUMENT	EVAL. (circle as appropriate) CODE
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I. ROUTINE MONITORING

A. Describe/perform/simulate the appropriate action, per referenced procedure(s), for Job Preparation.

1. Proper SWP dress TO-040-330 P

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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2. Vehicle Inspection TO-040-330 P

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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3. Start and warmup generators TO-040-330 S

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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4. Startup system TO-040-330 D

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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5. Source check TO-040-330 P

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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6. Analyze data TO-040-330 D

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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ACTIVITY	REFERENCE DOCUMENT	EVAL. (circle as appropriate) CODE
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**DRYWELL & LATERAL MONITORING
OJT CHECKLIST**

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OJT coding: P = perform, S = simulate, D = describe

I.B. Describe/perform/simulate the appropriate response, per referenced procedure(s), for Job Performance:

1. Enter data into NIM-BIN TO-040-330 S

DATE OJT TRAINER DATE OJT EVALUATOR

2. Index well TO-040-330 D

DATE OJT TRAINER DATE OJT EVALUATOR

3. Obtain reading(s) TO-040-330 D

DATE OJT TRAINER DATE OJT EVALUATOR

4. Analyze data TO-040-330 D

DATE OJT TRAINER DATE OJT EVALUATOR

I.C. Describe/perform/simulate the appropriate response, per the referenced procedure, for Job Completion:

1. Secure probe and equipment TO-040-330 D

DATE OJT TRAINER DATE OJT EVALUATOR

2. Survey vehicle and self TO-040-330 P

DATE OJT TRAINER DATE OJT EVALUATOR

ACTIVITY	REFERENCE DOCUMENT	EVAL. (circle as appropriate) CODE
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OJT CHECKLIST

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OJT coding: P = perform, S = simulate, D = describe

I.C. Describe/perform/simulate the appropriate response, per the referenced procedure, for Job Completion (cont'd.):

I.C.3. Transmit data to TO-040-330 S
CASS

DATE OJT TRAINER DATE OJT EVALUATOR

4. Complete paperwork TO-040-330 D

DATE OJT TRAINER DATE OJT EVALUATOR

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OJT coding: P = perform, S = simulate, D = describe

ACTIVITY	REFERENCE DOCUMENT	EVAL. (circle as appropriate) CODE
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II. SPECIAL MONITORING

Following the proper procedure, describe/perform/simulate as required to complete the following:

1. Neutron probe monitoring TO-040-330 S

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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2. Acoustic probe monitoring TO-040-330 S

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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**DRYWELL & LATERAL MONITORING
OJT CHECKLIST**

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OJT coding: P = perform, S = simulate, D = describe

ACTIVITY	REFERENCE DOCUMENT	EVAL. (circle as appropriate) CODE
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IV. DRYWELL MONITORING

Following the proper procedure, perform/simulate/describe as required for the following:

A. Routine monitoring:

1. Job Preparation TO-040-330 P

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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2. Job Performance TO-040-330 P S D

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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3. Job Completion TO-040-330 P S D

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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B. Neutron Probe Monitoring:

1. Job Preparation TO-040-330 P

DATE	OJT TRAINER	DATE	OJT EVALUATOR
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2. Job Performance TO-040-330 P S D

DATE	OJT TRAINER	DATE	OJT EVALUATOR
------	-------------	------	---------------

3. Job Completion TO-040-330 P S D

DATE	OJT TRAINER	DATE	OJT EVALUATOR
------	-------------	------	---------------

**DRYWELL & LATERAL MONITORING
OJT CHECKLIST**

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OJT coding: P = perform, S = simulate, D = describe

ACTIVITY	REFERENCE DOCUMENT	EVAL. (circle as appropriate) CODE
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IV.C. Acoustic Probe Monitoring

1.	Job Preparation	TO-040-330	P
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<u>DATE</u>	<u>OJT TRAINER</u>	<u>DATE</u>	<u>OJT EVALUATOR</u>
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2.	Job Performance	TO-040-330	P S D
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<u>DATE</u>	<u>OJT TRAINER</u>	<u>DATE</u>	<u>OJT EVALUATOR</u>
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3.	Job Completion	TO-040-330	P S D
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<u>DATE</u>	<u>OJT TRAINER</u>	<u>DATE</u>	<u>OJT EVALUATOR</u>
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ORAL EXPLANATION CHECKLIST

The oral exam section of this training package is used in conjunction with the OJT Checklist and the written exam section for initial certification of a trainee. For recertification the written and OJT sections are used.

The evaluator initials and dates each response and circles "S" for satisfactory, or "U" for unsatisfactory. A 70% correct response is required for satisfactory completion of the oral section. There are 18 questions, requiring 13 correct responses for 70%.

TRAINING OUTLINE

Job Title: Drywell and Lateral Monitoring

1. Introduction
 - a. History
 - b. Present
 - c. Future
 - d. Overview of System

2. Job Preparation
 - a. Proper SWP Dress
 - b. Equipment Startup
 - o Van
 - o Generator(s)
 - o Components
 - c. Source Checks
 - d. Task Sheet (assignments)

3. Job Performance
 - a. Drywells
 - o Probes
 - o Computer Operation
 - o Obtaining Reading
 - o Analysis

3.b. Laterals

- o Probes
- o Computer Operations
- o Obtaining Readings
- o Analysis

4. Job Completion

- a. Input Data to CASS
- b. Equipment Deactivation
- c. Analysis Followup

5. Neutron Probe

- a. Administrative Controls and Concerns
- b. Radiological Controls and Concerns

6. EP&APC

- a. Job Preliminary
- b. Job Performance
- c. Job Completion
- d. Administrative Controls and Concerns
- e. Radiological Controls and Concerns

7. Summary

- a. Drywells
- b. Laterals
- c. Question/Answer

8. Examination/Conclusion

PERFORMANCE OBJECTIVES

From this course the operator will be able to:

- o Perform routine drywell monitoring for any given tank with a 100% satisfactory evaluation.
- o Perform special drywell monitoring for any given tank with a 100% satisfactory evaluation.
- o Perform routine lateral monitoring for any given tank with a 100% satisfactory evaluation.
- o Perform special lateral monitoring for any given tank with a 100% satisfactory evaluation.

JOB TASK ANALYSIS

JOB TITLE: DRYWELL AND LATERAL MONITORING

JOB DESCRIPTION: The operator's tasks include:

- o Proper SWP dress requirements
- o Equipment startup procedures
- o Drywell monitoring operations
- o Lateral monitoring operations
- o Probe changeouts
- o Neutron probe monitoring
- o Data transfer to CASS
- o Equipment shutdown procedures
- o Radiological controls and concerns
- o Administrative controls and concerns
- o Emergency procedures
- o Abnormal condition actions

JOB REQUIREMENTS: The operator must have successfully completed the following:

- o Radiation Safety Training
- o Respirator Training
- o Respirator Fitting
- o Criticality Non-Fissile Handlers Training
- o Self-Monitoring Training
- o General Radiochemical Operations Training
- o Tank Farm Plant Specific Operations Training

DRYWELL AND LATERAL MONITORING CERTIFICATION
(0632)

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Reference Documents: Operating Procedures:

TO-020-070: Swab Radiations Readings in Pipeline Encasement Risers, Leak Detection Drywells, and InTank LOWs

TO-040-120: Leak Detection Lateral Monitoring for Lateral Caissons 241-SX-1 and 3, and A Farm

TO-040-140: Lateral Monitoring Operation for TK-108-SX, 109-SX, 112-SX, 114-SX, and 115-SX

TO-040-330: Drywell Surveillance Van Operating Procedure

Radiation Work Permits:

F-1:

F-14:

Manual:

RHO-CD-253

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STUDY QUESTIONS

Reference Documents:

Radiation Work Permits, RHO-MA-172:

1. F-1, "Tank Farm Operations"
2. F-14, "All Tank Farm Radiation Areas and Outside Areas"

Operating Documents:

3. TO-020-070, "Swab Radiation Readings in Pipeline Encasement Risers, Leak Detection Drywells, and In-Tank LOWs."
4. TO-040-120, "Leak Detection Lateral Monitoring for Lateral Caissons 241-SX-1 and 3 and A Farm."
5. TO-040-140, "Lateral Monitoring Operation for TK-108-SX, 109-SX, 112-SX, 114-SX, and 115-SX."
6. TO-040-330, "Drywell Surveillance Van Operating Procedure."

STUDY QUESTIONS

RADIATION SAFETY:

1. Identify personnel who may self-survey or self-monitor, and the dose rate that requires Radiation Protection monitoring. (1)
2. Identify the radiation dose rate requirements that must be zoned to warn personnel of such conditions. (1)
3. Identify the wind speed that will require the concurrence of Tank Farm and Radiation Protection management for the job to proceed. (1)
4. Describe the protective apparel requirements for Drywell and Lateral Monitoring readings. (2)
5. Describe the conditions that will invalidate RWP F-14 for work use. (2)
6. Identify the work conditions that require Radiation Protection assistance. (2)

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STUDY QUESTIONS

Radiation Safety (cont'd.)

7. Describe the items from the drywell trucks that must be surveyed and released by Radiation Protection. (2)

OPERATIONS AND FACILITIES:

8. Following comparison of swab riser data, identify changes that require notification of TFS&O management. (3)
9. Identify protective apparel required during swab readings. (3)
10. Describe the requirements for radiation monitoring. (3)
11. Identify possible contamination agents during swab readings. (3)
12. Cite the differences between GM and CP probes, and how they are used. (3)
13. Explain the lateral monitoring system for lateral caissons and how information is transmitted to CASS. (4)
14. Describe the process of changing probes, cite safety requirements. (4)
15. Identify the maximum vehicle speed for surveillance vans. (4)
16. Identify the specific document that denotes monitoring frequency for drywell and lateral monitoring. (5)
17. Describe the monitoring system startup sequence including warmup time. (5)
18. Identify what controls the rate of descent of the probe during lateral monitoring. (5)
19. Describe the items of equipment carried on the drywell monitoring van. (6)
20. Identify general safety requirements for operation of the surveillance van. (6)
21. Describe the safety requirements for operation of the surveillance van while carrying the neutron source. (6)

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STUDY QUESTIONS

Operations and Facilities (cont'd.)

22. Identify the AC Power Systems requirements for both the primary and auxiliary power units (voltage and frequency). (6)
23. Identify necessary steps to power up the system. (6)
24. Describe the probe checks and calibrations required before use. (6)
25. Explain what would be lost if the computer "RESET" button was pressed during system operation.
26. Describe the purpose and function of the "green" probe. (6)
27. Describe the purpose and function of the "red" probe. (6)
28. Describe the purpose and function of the neutron probe. (6)
29. Describe the purpose and function of the scintillation probe. (6)
30. Identify the frequency of measurement system cleanup. (6)
31. Identify the general considerations and cautions for well monitoring. (6)
32. Identify precautions to keep in maintaining computer system index of the top of the well. (6)
33. Describe the use of the "abort" button in returning the probe to the surface. (6)
34. Itemize the uses for the special scan. (6)
35. Itemize the cautions for using special scans. (6)
36. Describe the use of the dummy probe. (6)
37. Describe the neutron source. (6)
38. Identify precautions necessary during use or while carrying the neutron source. (6)
39. Describe the procedure to follow if the primary power shuts down. (6)

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STUDY QUESTIONS

Op/Fac (cont'd.)

40. Describe the procedure to follow if the primary power system cannot be returned online. (6)
41. Explain what must be done if neither the primary or auxiliary power systems are operable. (6)
42. Describe the Acoustical Van equipment and function. (6)
43. Explain the Acoustic Probe and system. (6)
44. Describe the cable and probe cleaning and charging requirements. (6)