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DOE FINAL REPORT PHASE ONE STARTUP WASTE RECEIVING AND PROCESSING FACILITY (WRAP)

WG Jasen
Waste Management Federal Services of Hanford, Inc., Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

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Key Words: WRAP, Phase 1, Doe Readiness Assessment (RA), Operational Readiness Review (ORR).

Abstract: This document is to validate that the WRAP facility is physically ready to startup phase I, that the managers and operators are prepared to safely manage and operate the facility when all Pre-start findings have been satisfactorily corrected.

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DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

FINAL REPORT

PHASE ONE STARTUP

WASTE RECEIVING AND
PROCESSING FACILITY

MODULE 1

EXECUTIVE SUMMARY

The DOE Readiness Assessment (RA) team spent a week on-site at Waste Receiving and Processing Module 1 (WRAP-1) to validate the readiness for phase I start up of facility.

The Contractor and DOE staff were exceptionally cooperative and contributed significantly to the overall success of the RA. The procedures and Conduct of Operations areas had significant discrepancies many which should of been found by the contractor review team. In addition the findings of the contractor review team should have led the WRAP 1 management team to correcting the root causes of the findings prior to the DOE RA team review. The findings and observations include many issues that the team believes should have been found by the contractor review and corrective actions taken.

A significantly improved Operational Readiness Review (ORR) process and corrective actions of root causes must be fully implemented by the contractor prior to the performance of the contractor ORR for phase II operations.

The following are the pre-start findings as a result of this independent DOE Readiness Assessment.

PRE-STARTS

- The controlled copy #86 of WHC-CM-5-34 located in the control room was updated to revision 77 as noted in the table of contents. The current revision is 82. Finding CR-1-001
- Plant Operating Procedures (POP) have action statements in Warning, Cautions, and Notes and are missing subsequent steps. Finding CR-1-003
- Numerous penetrations into the ground around the facility are not marked as requiring confined space entry. Finding CR-8-001
- All alarms associated with the WRAP-1 control room annunciator panel do not have corresponding alarm response procedures as required. Finding CR-12-006
- At least one operator aid was posted in the control room on panel 201-CNS-12-102 without authorization. Finding CR-12-007

SIGNATURE PAGE

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 F.M. Roddy, Team Member

3/7/97
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 S.J. Veitenheimer, Team Member

3/7/97
 Date

 J.J. Allen, Deputy Team Leader

3/7/97
 Date

Approved by:
 F. T. Daniels, Team Leader

3/7/97
 Date

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1.0 ORR Summary

The DOE Readiness Assessment Team, when all Pre-Start findings have been satisfactorily corrected, has determined that the contractor can maintain adequate protection of the public health and safety, worker safety, and the environment for phase 1 operations.

This final report documents the Department of Energy Richland Operations Office (RL) RA team review used to validate the readiness for startup of the Waste Receiving and Processing Module 1 (WRAP-1) phase 1 activities.

1.1 Scope

The objective of the RL RA process was to validate that the facility is physically ready to startup, validate that the managers and operators are prepared to safely manage and operate the facility, validate that the necessary infrastructure (procedures, staffing, compliance with DOE Orders, and rules) is in place, and validate that DOE management is ready to oversee the facility and facility management for phase 1 operations in accordance with the Auditable Safety Analysis.

1.2 RA Preparations

Prior to the commencement of the review the RA team determined that the prerequisites required by section 6.0 of the Plan of Action had been satisfied.

1.3 Order Compliance

With the exceptions as noted in the finding forms, all areas reviewed appeared to be in compliance with applicable DOE Orders.

1.4 Team Training

Training requirements established for the team were met prior to the commencement of the review. All team members were required to read the RL Plan of action, Readiness Plan, applicable sections of the contractor Final Report, applicable sections of the Auditable Safety Analysis, and DOE Order 425.1. Additionally, all team members had received WRAP-1 Facility orientation.

1.5 Basis for Acceptable Independence

No RA team member had line management responsibility for WRAP 1.

2.0 ORR SUMMARY BY FUNCTIONAL AREA

The following is a summary of results by functional area.

2.1 Radiation Protection

The radiological controls program is satisfactory to support operations of the WRAP. Radcon personnel are adequately trained and are sufficiently knowledgeable to support normal operations and emergencies. Equipment such as gloves, PPE, respirators, decon supplies and radios would enhance the radcon response to emergencies. An emergency recovery procedure with checklists would also enhance a more complete and timely response.

2.2 Procedures

The review of WRAP-1 Plant Operating Procedures and Maintenance Procedures showed deficiencies in the verification and validation process along with the writers guide used for the development of the procedures. One Plant Operating Procedure (POP) and one Maintenance Procedure (MP) were selected for observation. The POP could not be accomplished as written and was stopped by the operator performing the POP. The MP did not cover all needed areas. Additionally, nine findings and four observations were identified during the review. Upon completion of the two prestart findings the facility startup of phase 1 will be acceptable.

2.3 Maintenance

The Facility has a Maintenance Implementation Plan (MIP) that has been submitted to DOE for approval but has not yet been approved. The MIP is not a requirement until the facility is categorized as nuclear. They are working to the MIP and have developed the Maintenance program to meet the MIP. Calibration and PMS recall systems were in place. The maintenance Program is adequate for Phase 1 start up.

2.4 Safety Documentation

The ASA establishes an adequate authorization basis for operation of WRAP1 as a radiological facility. The established authorization basis is adequately implemented in the operating procedures. This conclusion should be construed as preliminary only, however, since the authorization basis for a radiological facility is only a subset of the authorization basis which will be required for Phase II.

2.5 Conduct of Operations

Reviews were conducted of plant documentation associated with Conduct of Operations. Additionally, plant inspections were performed to determine the degree of compliance to those requirements. Interviews were conducted with management, field supervisors, support organizations, and operations personnel. Based on the document reviews, interviews, and observations the review of the Conduct of Operations program contains weaknesses in control of the Out of Service equipment, labeling, communications, alarm response procedures, and operator aids. Upon correction of the pre-start findings identified in core requirement 12, Operations is ready for startup of the WRAP-1 Phase 1.

2.6 Training

Based on review of documents, interviews with personnel and observations, training and qualification programs for operations and operations support personnel have been established, documented, and implemented to support startup of WRAP-1 phase 1. The training and qualification program encompasses the range of duties and activities required to be performed. Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure training is adequate for operations. The routine and emergency operations drill program has been established and implemented to effectively support startup of WRAP-1 phase 1.

2.7 Hoisting and Rigging

Adequate management programs were established hoisting and rigging activities at WRAP-1. Sufficient number of qualified personnel are provided, and adequate facilities and equipment are available. The findings generated were all post start. The observations if acted upon will enhance the overall performance ensuring continued safe operations at WRAP-1.

2.8 Order Compliance

The compliance to orders is accomplished via the S/RID process and it is adequate. The upcoming S/RID revision (reference WPD memo 9751408 T. K. Teynor to H. J. Hatch) yielding a master RUST S/RID and then each RUST facility having a specific S/RID appendix that is tailored to the individual facility's needs will greatly improve the process.

2.9 Fire Protection

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure fire protection is adequate for the startup of WRAP-1 phase 1 operations. A thorough review of the ASA and FHA needs to be conducted to ensure all identified issues are appropriately dispositioned to meet the SRID/Order requirements. Additionally, the line of responsibilities between the HFD and the facility must be clearly understood (and listed) relative to inspection, testing, and maintenance of the fire protection system.

2.10 Oversight

An adequate process for facility operations has been established to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor.

2.11 Emergency Preparedness

Emergency preparedness programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available for facility operations.

2.12 DOE Oversight

The Operations office oversight programs such as Occurrence Reporting, Facility Representative, Corrective Action, and Quality Assurance Programs are adequate for facility operations.

3.13 Computers Control

Sufficient numbers of qualified programmers appear to be provided, and adequate facilities and equipment appear to be available to ensure computer software development, testing, and configuration control is adequate to support operations. The processes and documentation reviewed appear to be appropriate and adequate to meet applicable requirements.

3.0 CONCLUSION

The DOE Readiness Assessment Team, when all Pre-Start findings have been satisfactorily corrected, has determined that the contractor can maintain adequate protection of the public health and safety, worker safety, and the environment for WRAP-1 phase 1 operations.

APPENDIX 1

READINESS ASSESSMENT TEAM MEMBER SUMMARY

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Michael C. Humphreys

Core Requirement Assigned: 4, 8f

Normal Work Assignment: RL Senior Technical Advisor for Office of
Environmental, Safety, and Health

Summary of Facility Familiarization:

Required Reading

Initials

DOE Order 425.1

mtf

DOE Plan of Action

mtf

DOE Readiness Plan

mtf

Applicable Section of WRAP-1 ASA

mtfApplicable Sections of WRAP-1 Final
Reportmtf

Training

Facility Familiarization

mtf

Team Leader:

KH Daniels

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Dennis C. Humphreys

Core Requirement Assigned: 8g

Normal Work Assignment: RL Hoisting and Rigging Program Manager

Summary of Facility Familiarization:

Required Reading

Initials

DOE Order 425.1

DC

DOE Plan of Action

DC

DOE Readiness Plan

DC

Applicable Section of WRAP-1 ASA

DC

Applicable Sections of WRAP-1 Final Report

DC

Training

Facility Familiarization

DC

Team Leader:

HDaniel

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Steve J. Veitenheimer

Core Requirement Assigned: 8e

Normal Work Assignment: Quality, Safety and Health Division
Director

Summary of Facility Familiarization:

Required Reading

DOE Order 425.1

DOE Plan of Action

DOE Readiness Plan

Applicable Section of WRAP-1 ASA

Applicable Sections of WRAP-1 Final
Report

Initials

Training

Facility Familiarization

Team Leader:

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Marcanne L. Green

Core Requirement Assigned: 8h

Normal Work Assignment: RL Hanford Analytical Services Program Engineer

Summary of Facility Familiarization:

Required Reading

Initials

DOE Order 425.1

MLG

DOE Plan of Action

MLG

DOE Readiness Plan

MLG

Applicable Section of WRAP-1 ASA

MLG

Applicable Sections of WRAP-1 Final Report

MLG

Training

Facility Familiarization

MLG

Team Leader:

MLDaniels

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Tom Daniels

Core Requirement Assigned: 11

Normal Work Assignment: RL Waste Operations Division Director

Summary of Facility Familiarization:

Required Reading

Initials

DOE Order 425.1

TD

DOE Plan of Action

TD

DOE Readiness Plan

TD

Applicable Section of WRAP-1 ASA

TDApplicable Sections of WRAP-1 Final
ReportTD

Training

Facility Familiarization

TD

Team Leader:

T. I. Daniels

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: John D. Long

Core Requirement Assigned: 6, 8d, 20

Normal Work Assignment: RL Occurrence Reporting Program Manager

Summary of Facility Familiarization:

Required Reading

DOE Order 425.1

DOE Plan of Action

DOE Readiness Plan

Applicable Section of WRAP-1 ASA

Applicable Sections of WRAP-1 Final
Report

Initials

Training

Facility Familiarization

Team Leader:

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Gordon G. Gossell

Core Requirement Assigned: 1

Normal Work Assignment: ICF Kaiser ORR/RA Program Assistant

Summary of Facility Familiarization:

Required Reading

DOE Order 425.1

DOE Plan of Action

DOE Readiness Plan

Applicable Section of WRAP-1 ASA

Applicable Sections of WRAP-1 Final
Report

Initials

GGGGGGGGGGGG

Training

Facility Familiarization

GGTeam Leader: AS Daniels

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Colleen A. Meyers

Core Requirement Assigned: 2, 8a, 9

Normal Work Assignment: RL Office of Training

Summary of Facility Familiarization:

Required Reading

Initials

DOE Order 425.1

CKM

DOE Plan of Action

CKM

DOE Readiness Plan

CKM

Applicable Section of WRAP-1 ASA

CKM

Applicable Sections of WRAP-1 Final Report

CKM

Training

Facility Familiarization

CKM

Team Leader:

HLanich

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DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Larry D. Earley

Core Requirement Assigned: 7

Normal Work Assignment: RL Facility Representative

Summary of Facility Familiarization:

Required Reading

Initials

DOE Order 425.1

me

DOE Plan of Action

me

DOE Readiness Plan

me

Applicable Section of WRAP-1 ASA

meApplicable Sections of WRAP-1 Final
Reportme

Training

Facility Familiarization

me

Team Leader:

LD Earley

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Kenneth L. Harris

Core Requirement Assigned: 5, 8b

Normal Work Assignment: Professional Analysis, Inc

Summary of Facility Familiarization:

Required Reading

Initials

DOE Order 425.1

KLH

DOE Plan of Action

KLH

DOE Readiness Plan

KLH

Applicable Section of WRAP-1 ASA

KLHApplicable Sections of WRAP-1 Final
ReportKLH

Training

Facility Familiarization

KLH

Team Leader:

KLH

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: James J. Allen

Core Requirement Assigned: 3, 12, 13, 17

Normal Work Assignment: RL ORR/RA Program Manager

Summary of Facility Familiarization:

Required Reading

DOE Order 425.1

DOE Plan of Action

DOE Readiness Plan

Applicable Section of WRAP-1 ASA

Applicable Sections of WRAP-1 Final Report

Initials

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Training

Facility Familiarization

Team Leader: *James J. Allen*

DOE RL READINESS ASSESSMENT TEAM MEMBER SUMMARY

Team Member Name: Frank M. Roddy

Core Requirement Assigned: 8c

Normal Work Assignment: RL Senior Technical Advisor for Waste
Management

Summary of Facility Familiarization:

Required Reading

Initials

DOE Order 425.1

FMR

DOE Plan of Action

FMR

DOE Readiness Plan

FMR

Applicable Section of WRAP-1 ASA

FMRApplicable Sections of WRAP-1 Final
ReportFMR

Training

Facility Familiarization

FMR

Team Leader:

J. J. Daniels

APPENDIX 2

PRE START FINDINGS

RA FINDING FORM

CR Number: 1	Pre-Start	Issue No: 1-001 Date: 3/6/97
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Issue: The controlled copy #86 of WHC-CM-5-34 located in the Control Room was updated to revision 77 as noted in the table of contents. The current revision is 82.

Requirement: Superseded documents shall be removed from work areas and replaced with revised documents on the effective date of the change.

References: HNF-CM-5-36 Chapter 3-5 Section 12 paragraph 5.1.8

Discussion: The revisions from 77 to 82 affected 12 manual sections including the SWD safety program, change control, fire protection, work management, lockouts and tagouts, and alarm management.

Conclusion: There must be a formal program in place to ensure copies of controlled manuals in the work place are updated.

Inspector: Larry D. Earley	Approved: <u>JJ Daniels</u> Team Leader Date: 3/6/97
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RA FINDING FORM

CR Number: 8	Pre-Start	Issue No: 8-001 Date: 03/05/97
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Issue:

Numerous penetrations into the ground around the facility are not marked as requiring confined space entry.

Requirement:

29 CFR 1910.146

References:

WHC-CM-5-36, Section 1-11, WKH-5

Discussion:

Drain west of parking lot, drain west of maintenance laydown area, drain south east corner of maintenance laydown, sewer and telephone north waste corner of maintenance building, telephone north of WRAP building, 2 drains east of WRAP, and 4 sewer east of WRAP do not have "Confined Space" placards on them as required.

Conclusion:

Contractor must determine the need for "Confined Space" identification and install placards on required spaces.

Inspector: G.A. Gossell	Approved: <u>H. Danilo</u> Date: 03/05/97
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RA FINDING FORM

CR Number: 12	Pre-Start	Issue No: 12-006 Date: 3/5/97
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Issue: All alarms associated with the WRAP-1 control room annunciator panel do not have corresponding alarm response procedures as required.

Requirement: WHC-CM-5-34, Section 3.16, 5.0. "Each facility shall have plant operating procedures to address all active alarms."

Condition: The following control room annunciator drops do not have a direct correlation to approved alarm response procedures.

- Loss of transformer (T-13-101).
- Loss of transformer (T-13-102).
- Fire alarm system trouble.
- Air compressor trouble.

Additionally, the control room operator was not certain what actions were required in the event of a Fire Alarm System Trouble annunciator alarm. Alarm response procedures should specify immediate and supplemental actions as appropriate and adequate training must be given to operations personnel.

Conclusion: Abnormal response procedures must be developed for all applicable annunciator drops associated with phase 1 of facility operation. Additionally, operators must be provided training and drill scenarios for the abnormal conditions/procedures.

Inspector: Veitenheimer, SJ	Approved: <u><i>H. Daniech</i></u> Team Leader Date: 3/6/97
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RA FINDING FORM

CR Number: 12	Pre-Start	Issue No: 12-007 Date: 3/5/97
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Issue: At least one operator aid was posted in the control room on panel 201-CNS-12-102 without authorization.

Requirement: WHC-CM-5-34, Section 3.23, 5.0. "Operator aids shall meet the following requirements....

4. Be filed as a completed Operator Aid Authorization in the Operator Aid Logbook."

Condition: A measurement scale posted on control room panel 201-CNS-12-102 was not approved and logged by operations as required. Additionally, it is not clear that the Criticality Safety Postings located throughout parts of the facility adequately meets the requirements of WHC-CM-5-34.

Conclusion: A review of the operator aid program must be accomplished to ensure all applicable postings are appropriately accepted and documented.

Inspector: Veitenheimer, SJ	Approved: <u><i>SL Daniels</i></u> Date: 3/6/97
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APPENDIX 3
POST START FINDINGS

RA FINDING FORM

CR Number: 1	Post Start	Issue No: 1-002
		Date: 03/06/97

Issue: Procedure can not be performed as written.

Requirement: "The procedure list sequential action steps for the operator..."

References: WHC-IP-0673 section 3.11 and DOE Order 5480.19 chapter 16.

Discussion: In the review of POP 1301, Operation of the Compressed Air System, question arose on the operability of the POP therefor operations was ask to do a walk through of the procedure. The walk through was stopped at step B.1 due to the operator being required to open a previously opened valve (Valve was opened as part of a valve lineup). The procedure could not be performed as written. Due to the non repetitive nature of this POP only procedures of this type require review.

Conclusion: Semi-annual maintenance procedures and system lineup procedures require validation that they can be performed.

Inspector: G.A. Gossell	Approved: <u><i>HS Daniels</i></u>
	Date: 03/06/97

RA FINDING FORM

CR Number: 1	Post Start	Issue No: 1-004 Date: 03/06/97
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Issue: Auditable Safety Analysis Matrix from Administrative manual does not contain all requirements from the ASA.

Requirement: Matrix states requirements from ASA and provides the implementation procedures.

References: HNF-IP-1237

Discussion: Review of Auditable Safety Analysis to Administrative Manual, HNF-IP-1237 section, 3.11, Auditable Safety Analysis (ASA) Matrix provided objective evidence that ASA requirements had procedures implemented to satisfy the requirement. However, ASA commitment from chapter 2 appendix 2c, for quarterly check when weather conditions are below 40 F. is not included in the matrix.

Conclusion: The Auditable Safety Analysis (ASA) Matrix must be revised to include requirement for the quarterly check of the fire protection pressure switch required by chapter 2 appendix 2 of the ASA.

Inspector: G.A. Gossell	Approved: <u><i>G.A. Gossell</i></u> Date: 03/06/97
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RA FINDING FORM

CR Number: 1	Post Start	Issue No: 1-005 Date: 03/06/97
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Issue: Not all spaces required to be checked for cold weather protection are included in weekly surveillance.

Requirement: Cold weather protection requirements shall be in place.

References: DOE Order 4430.4B

Discussion: Room 152 (Material handling room) is not included in POP 102 although it does have water connections that are susceptible to cold weather.

Conclusion: POP 102 must be revised to include room 152 a complete walkdown of all WRAP 1 spaces must be conducted to assure all applicable spaces are included in POP 102.

Inspector: G.A. Gossell	Approved: <u>HL Daniels</u> Date: 03/06/97
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RA FINDING FORM

CR Number: 1	Post Start	Issue No: 1-006
		Date: 03/06/97

Issue: Procedures are not written using the correct nomenclature available.

Requirement: The task identifies major steps...

References: WHC-IP-0673

Discussion: Procedures are not written using the correct nomenclature. During the walkdown of POP 1301 a power panel breaker was required to be shut however the breaker to be closed could not be verified as the correct breaker due to the circuit schedule using what looked like a circuit designation vise the name of the component supplied.

Conclusion: POP's require checking to assure that the correct nomenclature is available for the operator to verify the correct equipment is being operated.

Inspector: G.A. Gossell	Approved: <u><i>JD Daniels</i></u>
	Date: 03/06/97

RA FINDING FORM

CR Number: 01	Post Start	Issue No: 1-007
		Date: 03/06/97

Issue: Weekly cold weather protection surveillance is inadequate.

Requirement: Facilities are required to be protected from cold weather.

References: DOE Order 4430.4B

Discussion: Operating procedure OP-102 weekly surveillance does not check that doors operate properly, weather stripping is in place and in good repair, other penetrations into the facility are properly sealed.

Conclusion: Plant Operating Procedure 102 requires revision to incorporate all means of cold weather protection requirements.

Inspector: G.A. Gossell	Approved: <u><i>JS Daniels</i></u>
	Date: 03/06/97

RA FINDING FORM

CR Number: 1	Post Start	Issue No: 1-008 Date: 03/06/97
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Issue: WHC-IP-0673 does not include all statements from DOE Order 5480.19 chapter 16.

Requirement: Conformance with the requirements of this order shall be documented...

References: DOE Order 4580.19 and contractor Conduct of Operations Matrix.

Discussion: No exemptions were taken in the Conduct of Operations Matrix for DOE Order 5480.19 chapter 16. WHC-IP-0673 does not include all statements from the Order even though no exemption were taken.

Conclusion: Revise WHC-IP-0673 to incorporate all statement from DOE Order 5480.19 chapter 16

Inspector: G.A. Gossell	Approved: <u><i>J. Daniel</i></u> Date: 03/06/97
-------------------------	---

RA FINDING FORM

CR Number: 1	Post Start	Issue No: 1-009
		Date: 03/07/97

Issue: POP's and Maintenance Procedures are not written in accordance with DOE Order 5480.19 chapter 16.

Requirement: Warning Cautions and Notes ... on the same page and preceding the step applicable to.

References: DOE Order 5480.19 Chapter 16

Discussion: Plant Operating Procedures and Maintenance Procedures are not written to the requirements DOE Order 5480.19. Warning, Cautions and Notes are not on the same page as the step they pertain to. This is not required by WHC-IP-0673 but is a violation of DOE Order 5480.19 and a human factors concern.

Conclusion: All procedures require checking to assure Warnings, Cautions and Notes are on the same page as the step that they pertain to.

Inspector: G.A. Gossell	Approved: <u>JS Daniels</u>
	Date: 03/06/97

RA FINDING FORM

CR Number: 2	Post Start	Issue No: 2-001 Date: 3/6/97
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Issue:

An approved RL-OTR procedure was not used to document an exception to the education requirement called out in the Training Implementation Matrix (TIM) WHC-IP-1237.

Requirement:

"Any exception taken to the education and experience requirements called out in the WRAP 1 TIM must be documented in accordance with an RL-OTR approved procedure, which in this case is WHC-IP-1041, Appointments of Personnel NOT Meeting Selection Criteria.

References:

DOE Order 5480.20A, WHC-IP-1237, WHC-IP-1041

Discussion:

WRAP 1 takes exception to the requirement for education and experience in their TIM. The justification reference used is WHC-CM-5-34, Section 1.8, part 5.2. DOE Order 5480.20A, which must be a reference in this case because the TIM was prepared to clearly establish the relationship of the WRAP Facility activities to the Order, states that it is the responsibility of the DOE Operations Office Manager or designee to: "Approve contractor procedures which are established to grant exceptions to specific training or qualification requirements for an individual." This has been accomplished at RL by DOE approval of WHC-IP-1041. WHC-IP-0141 is the procedure that should be used to document the exception to education for the operations manager and this justification should appear in this file. Instead, WRAP 1 has used WHC-CM-5-34.

Conclusion:

Although there is no question as to the qualifications of the operations manager; an approved RL-OTR procedure was not used to document an exception to the education requirement called out in the Training Implementation Matrix (TIM) WHC-IP-1237.

Inspector: Colleen A. Meyers	Approved: <u><i>J. Daniels</i></u> Date:
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RA FINDING FORM

CR Number: 8a	Post Start	Issue No: 8a-001 Date: 3/4/97
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Issue:

There is no evidence of a formal PIC training program.

Requirement:

"Each oral examination is documented on an oral examination form identified in the examination procedures and supplied to each examiner."

References:

WHC-CM-5-34, 1.8 Training Plan Rev 4, 5.4.5.3

Discussion:

In the WRAP 1 Person-In-Charge Training Requirements Checklist Course Number 306550 Documentation Page, by signing the checklist they are saying that the individual has "... completed the above training/reading assignments and can answer the listed learning objectives." There is no mention of specific learning objectives, and no learning objectives are listed in the checklist.

Also, the questions asked during the oral checkout were not documented. PIC competency is a major issue in recent occurrences on the site. The current method of qualifying PICs does not lend confidence that the level of knowledge in each area of responsibility is sufficient.

Conclusion:

Contrary to the requirements of WHC-CM-5-34, 1.8, the PIC training program is not formally documented to ensure specific learning objectives are identified and learned and oral checkout questions consistently documented.

Inspector: Colleen A. Meyers	Approved: Team Leader Date: 3/6/97
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RA FINDING FORM

CR Number: 8d	Post Start	Issue No: 8d-001
		Date: 3/4/97

Issue: There is no control for the issue of hand held radios.

Requirement: Radio communication equipment used in normal operations is available for emergencies.

References: HNF-CM-5-34, Section 3.9 Rev 2, Para. 5.4.1.

Discussion: The Operations Manager indicated that the hand held radios are not controlled and they are taken on a "first come first served" basis.

Conclusion: A program for radio accountability must be established and adhered to.

Inspector: L. D. Earley	Approved: <u><i>LD Daniels</i></u>
	Date: 3/6/97

RA FINDING FORM

CR Number: 8e	Post-Start	Issue No: 8e-001 Date: 3-5-97
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Issue: The 1993 Fire Hazards Analysis (FHA) of record does not adequately reflect the current conditions of the facility. Additionally, the Auditable Safety Analysis (ASA) does not provide a consistent technical analysis which is in agreement with the FHA.

Requirement: SRID WHC-IP-1120, Chapter 12, 12.4. "A graded FHA, that reflects the risks from fire in a facility, shall be performed for new facilities".

Condition:

An evaluation was performed of the recently developed Auditable Safety Analysis (ASA) as well as the 1993 Fire Hazards Analysis (FHA) of record. The following bullets represent inadequacies relative to these documents. (Additionally, it should be realized that information regarding the dry chemical fire extinguishing system is included for information although not part of this Readiness Assessment activity. This information should be used, however, to prepare for the future operation of that system.)

1. ASA Section 2.7.4 (page 2-21) states that to help contain potential fires, a 2 hour fire rated wall is provided between the shipping, receiving and NDE/NDA area from the administration and utility areas. ASA Section 11.4.1.4 (page 11-5), however, states that "WRAP-1 is considered to be a single fire area." These "fire walls" are supported by unprotected (not fire proofed) steel columns and the fire walls would fail in a fire scenario because they are not structurally supported by members that are fire resistant. Also the 1993 FHA does not provide an adequate analysis relative to the fire walls and concerns that the fire walls would not stand up in a real fire scenario.
2. ASA Section 2.7.4.1 (page 2-21) states the water demand for fire protection for WRAP-1 to be 815 gallons per minute (gpm) at 52 psi. The October 1993 FHA, Page 21, however, states that the highest demand requires a sprinkler system with a ".38 gpm over 2,000 sq. ft" density plus NFPA 13 and NFPA 231C required fire department hose stream allowance to be added. The actual fire water demand based on sprinkler system calculations from the WRAP-1 sprinkler contractor (Fire Systems West, Inc. of Vancouver Washington) is in the shipping and receiving area (highest demand) at 1079 gpm at

71 psi. The [draft] FHA states that the available supply pressure at 1079 gpm is 95 psi. Therefore, it appears (based on the draft FHA) that the supply available can meet the fire protection demand. Unfortunately, the ASA provides fire flow demand information that has no basis and both the ASA and the 1993 FHA do not conclude whether or not the supply is sufficient to meet fire flow demand.

3. ASA Section 3.3.2.1 (page 3-8) states that "accumulation of combustible material is tightly controlled in WRAP-1...", Section 3.3.2.3.3 (page 3-14) states that fire "is not expected to propagate because conduct of operations limits combustibles and surveillances are conducted to enforce this limitation" and yet in ASA Section 11.4.3 (page 11-8) the "Combustible Loading Control" program is not specific as to what exactly the "limits [of] combustibles" are and what "limitations" are exactly controlled and imposed. The 1993 FHA also does not describe in sufficient detail what is included in the combustible control program. Any administrative controls of combustibles taken credit for must be succinctly described in terms of defined fuel packages and arrangement, separation distances from other fuel packages, and locations in WRAP-1 that operational personnel can easily understand.
4. ASA Section 3.3.2.3.3 (page 3-15) discusses how workers "would evacuate the area" in the event of fire. Yet ASA Chapter 11 does not discuss exactly what procedures require the employees to evacuate and how those procedures are communicated to the employees.
5. ASA Section 3.4.2 (page 3-24) states that "the only significant sources of combustibles in the drum area are the contents of the drums themselves." In reality, there are combustible fire hazards that are intrinsic to the facility, including; forklifts in the shipping/receiving area and stacker/retrieval system that has hydraulic fluid which can create a spray or significant pool fire (failures have occurred in commercial facilities where the hot hydraulic fluid is auto-ignited or ignited on hot surfaces of machinery); the NDE/NDA area equipment utilizes massive amounts of polyethylene shielding that can credibly burn and create a pool fire scenario; glove boxes in the process area have interior lexan windows and hydraulic fluid that can burn; there is a potential for a major diesel fuel spill in the truck loading area; and the process area has a large quantity (approximately 500 gallons) of hydraulic fluid for compactors and manipulators that can cause structural

damage, involve radiological material, and release source term. Additionally, not all of these hazards identified are addressed by the referenced 1993 fire hazard analysis.

6. ASA Section 10.3 (page 10-2) references acceptance testing that has been performed on fire protection systems. The RA needed to verify that complete operational acceptance tests were performed on the glove box dry chemical extinguishing systems, the fire alarm and detection systems, the fire sprinkler systems, smoke and fire dampers, and rolling fire shutters separating the plant from the control room. NFPA 13 requires the sprinkler system acceptance tests to have written records of the flushing of the pipe, hydrostatic tests, tests of all valves and alarm components, including a material test certificate for above and underground piping and as-built system drawings. NFPA 17 requires the dry chemical systems to have had a discharge of the dry chemical in sufficient amounts to verify that the system is properly installed and functions and that the piping after the discharge was blown clean with compressed air or nitrogen, and NFPA 72 requires the fire alarm and detection system to have a complete functional testing of all panels, detectors, and pull stations. NFPA 90A for smoke and fire dampers requires that the dampers be operated to ensure that they function as intended. NFPA 80 for the rolling fire shutters does not specifically identify acceptance testing, however, a test of these shutters should have been performed to verify that they work as intended. The ASA does not mention exactly what was included in the acceptance testing of the fire protection systems.

Information obtained from the Hanford Fire Department indicated that they performed acceptance testing of heat detectors, aux. boxes, bells, strobes, pull boxes, and sprinkler systems. Information obtained from the facility indicate that they performed alarm testing. It is not clear which organization performed testing on smoke/fire dampers and rolling fire shutters.

7. ASA Section 10.4 (Page 10-2) references fire protection inspection, testing, and maintenance program. The RA needed to verify that a program and procedures are in place for the inspection, testing, and maintenance for the fire protection equipment, including glove box dry chemical extinguishing systems, the fire alarm and detection systems, the fire sprinkler systems, smoke and fire dampers, and the rolling fire shutters separating the plant from the control room. The procedures must specify the roles and responsibilities of whether WRAP operations or the fire department will perform the functions.

A Memorandum of Understanding (MOU) currently exists between the facility and the Hanford Fire Department. The MOU states that the facility "shall be responsible for the overall operation, maintenance, testing, design and configuration management of the fire protection systems within WRAP 1 facilities; shall be responsible for conducting fire protection system inspections as required by WHC-CM-4-41, Fire Protection Program Manual, Section 4.2." Additionally, the MOU states that the HFD is responsible for "conducting periodic inspections, operability / functional tests and preventive maintenance as required by WHC-CM-4-41, Section 4.2." Although 4-41 provides some guidance with * labels, it is not clear which sections of 4-41 are applicable to WRAP-1 and who has responsibility for conducting those tests.

8. ASA Section 11.4 (page 11-4) and ASA Section 3.4.2 (page 3-24) mentions two series of fire tests were conducted and they are "summarized in Section 11.4.1.5." Unfortunately, there is no ASA Section 11.4.1.5 and nowhere in the ASA are these tests summarized.
9. ASA Section 11.4.1 (page 11-4) states that the fire hazard analysis (1993) "defines the main fire protection issues for this final safety analysis report". The following comments are provided:
 - a. What final safety analysis report is the ASA referencing?
 - b. The 1993 FHA does not adequately address all of the fire hazards associated with the WRAP-1 facility, including, forklifts in the shipping/receiving area and stacker/retrieval system that have hydraulic fluid that can create a spray or significant pool fire, the NDE/NDA area equipment utilizes massive amounts of polyethylene shielding that can credibly burn and create a pool fire scenario, glove boxes in the process area have interior lexan windows and hydraulic fluid that can burn, there is a potential for a major diesel fuel spill in the truck loading area, and the process area has a large quantity (approximately 500 gallons) of hydraulic fluid for compactors and manipulators that can cause structural damage, involve radiological material and release source term. These items are also not mentioned in the ASA as potential fire hazards that could destroy the facility and release greater source term than predicted.

- c. Effects of the fire to the WRAP-1 structure have not been appropriately analyzed in the FHA and ASA.
- d. The current FHA burns the building to the ground but the ASA does not release all of the source term involved in such an FHA scenario or provide mitigative actions require to ensure that the building will not burn to the ground and have source term released.
- e. Although many drums and their contents are involved in the FHA fire scenario, the ASA does not analyze or explain the FHA scenario or consequence.
- f. The 1993 FHA does not demonstrate that although the maximum possible fire loss exceeds \$50 million (\$91 million), how a redundant fire protection system has been provided to limit the damage to less than \$50 million as required by DOE 5480.7A. A fire department response could be credited as the redundant fire protection system, provided that the facility has an automatic detection system installed throughout the facility (the facility has a fire detection system, but this is not described succinctly by the FHA and the ASA if detection has been provided throughout the facility) and the FHA analytically demonstrated how the fire detection coupled with fire department would limit the fire loss to less than \$50 million when the fire sprinkler system is failed. (Note that the draft FHA does not credit the fire department as a redundant system. It is very difficult to count the fire department to mitigate these accidents because the fire department is only required to staff and respond to one major fire emergency on site at any time; so an earthquake followed by fire scenario would not guarantee a fire department response. Instead the draft FHA states that there is no redundant fire protection system to limit the maximum loss so the draft FHA recommends to fire proof the structural beams and columns to limit the damage potential to less than \$1 million).
- g. Fire drum testing was conducted to develop modeling methods that could be used to support fire hazard and safety analyses for solid waste facilities. The model was developed with the intent to demonstrate a lesser fire potential than burning everything in a fire area. Unfortunately, the WRAP-1 1993 FHA and the ASA did not utilize the fire modeling methods gained from the fire testing.

10. ASA Section 11.4.1.2 (page 11-5) states that a WRAP-1 "fire loading" was performed in Appendix M of the 1993 FHA. This is misleading because Appendix M of the FHA that is referenced was not a combustible fire analysis but a Uniform Building Code compliance assessment that does not address the actual fire hazards of chemicals that may be in the facility.
11. ASA Section 11.4.1.4 (page 11-5) states that "all criteria and objectives listed in DOE 5480.7A have been met by the design", however, the FHA issues identified above in paragraph 9 demonstrate that this is not true.
12. ASA Section 11.4.2.3 (Page 11-7) has erroneous information that a "remote [fire station is] located approximately 10-15 minutes from the facility". Because of the travel distances between fire stations on site each station must be able to mount an interior attack without waiting for additional response/back up units from other stations to arrive (each fire station at Hanford must function as a "mini" fire department from response perspective). While other units could come from other fire stations at Hanford to assist in a WRAP-1 major fire, travel times for these units from outside the 200 area fire department can be expected to range from fifteen to nineteen minutes (per interview with the Chief of the HFD) only in optimum driving conditions.
13. ASA Section 11.4.5.1 (Page 11-9) states that the prevention program ensures that fire prevention is done and fire protection systems are being maintained. Yet the ASA does not specify who performs this work, what agreements are in place, how often the work is done, and what is actually done.

Conclusion:

A thorough review of the ASA and FHA needs to be conducted to ensure all identified issues are appropriately dispositioned to meet the SRID/Order requirements. Additionally, the line of responsibilities between the HFD and the facility must be clearly understood (and listed) relative to inspection, testing, and maintenance of the fire protection system.

Inspector: Veitenheimer, SJ	Approved: <u>H. Daniels</u> Team Leader Date: 3/6/97
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RA FINDING FORM

CR Number: 8g	Post Start	Issue No: 8g-001 Date: 3/4/97
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Issue: Two facility electric fork lift trucks do not have the correct pre-use (daily inspection) check list.

Requirement: Reference 1, chapter 6, section 6.3.3 states that the forklift truck custodian "ensure that the proper frequent (pre-use) inspection instruction is attached ... operator."

Reference 1, chapter 6, section 6.11.2.1, states "Frequent inspection instructions listing inspection steps be readily available to the operator. It ... equipment. Standard instructions will be suitable ...instructions. (Refer to para 6.3 "Responsibilities.")"

References: DOE-RL-92-36, Hanford Site Hoisting and Rigging Manual.

Discussion: The electric forklift trucks do have a pre-use checklist attached but it is for an engine powered forklift truck. Electric trucks have some items to check that are different than internal combustion trucks and vice versa. The electric barrel lifting truck does have a pre-use checklist for an electric powered machine.

The ORR team identified that a pre-checklist was not attached and this item was closed out on 12/15/96.

Conclusions: The pre-use checklists attached to the two Hyster Electric Forklift Trucks model number XL2 and 120 (HO-75-5375 and 5376) are for engine powered forklift trucks and are required to be applicable to the forklift truck. The checklists must be replaced with one applicable to an electric forklift truck.

Inspector: Dennis C Humphreys	Approved: <u><i>JD Daniels</i></u> Date: 3/5/97
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RA FINDING FORM

CR Number: 8g	Post Start	Issue No: 8g-002 Date: 3/4/97
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Issue: Two facility electric forklift trucks do not have their rated capacity clearly marked on the forklift.

Requirement: Reference 1, Chapter 6, Section 6.4.5.3, states "The rated capacity shall be clearly marked on all forklift trucks."

References: DOE-RL-92-36, Hanford Site Hoisting and Rigging Manual.

Discussion: The gas operated forklift and barrel trucks have their rated capacity clearly marked on them.

The capacity should be stated in S.A.E and metric format because the barrels coming from other facilities maybe marked in kilograms.

Conclusion: The two Hyster Electric Forklift Trucks model number 120 and XL2 (HO-75-5375 and 5376) must be marked with their rated capacity.

Inspector: Dennis C Humphreys	Approved: <u><i>JD Daniels</i></u> Date: 3/5/97
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RA FINDING FORM

CR Number: 8g	Post Start	Issue No: 8g-003 Date:
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Issue: There is no formal program established for the qualification or verification of qualification of personnel performing in the capacity of "qualified inspectors" in the area of crane and rigging equipment periodic inspection.

Requirement: Training, evaluations and on-the-job (OJT) programs are required for personnel who act as a Designated Leader or who direct, operate, or perform work, such as the following the following activities, that are covered by this manual.

References: DOE-RL-92-36, Hanford Site Hoisting and Rigging Manual, Chapter 4, Section 4.3.

Discussion: Hoisting and Rigging equipment, such as jib cranes and bridge, have routine periodic inspection requirements. Those periodic inspections requiring documentation call for a qualified inspector to perform this inspection. The above referenced section describes the training requirements for those personnel involved with equipment inspection. There is specific training available both on and offsite for the training of overhead bridge crane and jib crane inspections, both mechanical and electrical. Even though basic and advanced crane and rigging training does touch on the acceptance and rejection criteria it does not go into the techniques and methods of inspections. This type of training is essential for personnel performing periodic inspections as described above.

Conclusion: A formal program for the qualification and verification of qualification in accordance with the Hanford Site Hoisting and Rigging Manual qualified inspector requirements must be established and implemented.

Inspector: Dennis C Humphreys	Approved: <u><i>JD Daniels</i></u> Team Leader Date: 3/6/97
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RA FINDING FORM

CR Number: 12	Post Start	Issue No: 12-001 Date: 3/4/97
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Issue: Verifier does not verify that the boundaries provide full isolation as required by procedure

Requirement: Verify that the position and condition of the equipment or components covered by the lockout/tagout provides full isolation.

References: HNF-CM-5-36 SWD Internal Requirements Chapter 1-5, Standard Operating Practices Section 9.1 Controlling Organization, Hazardous Energy Control Step 7.2.1.

Discussion: Through interviews with a Verifier, Management, and the Lock and Tag administrator, and through observation of two lockouts, it was identified that the verifier identified the tag was hung on the appropriate component and the tag was administratively correct. This does not meet the requirements of the procedure.

Conclusion: Lock and Tag verifiers do not verify that the tag being hung provides full isolation. This activity is performed by the technical reviewer, and should not be necessary, but it is required by the referenced procedure. The referenced requirements must be revised.

Inspector: James J. Allen	Approved: <u><i>J. Daniels</i></u> Date: 3/5/97
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RA FINDING FORM

CR Number: 12	Post Start	Issue No: 12-002 Date: 3/4/97
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Issue: Alarms that are out of service are not logged in the Out of Service Log or in the Control Room log.

Requirement: Ref 1. "Alarm status information shall be noted in facility logbooks..."

Ref 2. "...alarm or instrument which does not provide reliable indication or response shall immediately notify the DOS of the condition."

References: 1. HNF-CM-5-34 Section 3.13 Rev.2
2. WHC-IP-1237 section 3.3 Rev. 0

Discussion: Criticality alarms that are not in service are identified with an improper tag as being not in service, and are not logged in the Out of Service logbook. There are no entries in the Control Room logbook that identify the criticality alarms are out of service.

Conclusion: Alarms that are out of service must be logged in the out of service logbook and in the control room logbook to ensure the current alarm status is known by on watch personnel.

Inspector: James J. Allen	Approved: <u><i>H. Daniels</i></u> Date: 3/5/97
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RA FINDING FORM

CR Number: 12	Post Start	Issue No: 12-003 Date: 3/4/97
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Issue: Out of Service log has not been audited.

Requirement: "Duty Operations Supervisor Audit Tag Logs Weekly"

References: WHC-IP-1237 Section 3.3 Rev 0 paragraph 4.2.5

Discussion: The Duty Operations Supervisor's responsibility includes conducting audits of the Out of Service logbook. There are no audits of the Out of Service logbook.

Conclusion: The Out of Service log has not been audited as required by the reference. This audit must be performed weekly and may have identified the deficiency of the criticality alarm not being included in the log and the improper label on the alarm panel.

Inspector: James J Allen	Approved: <u><i>H. Daniels</i></u> Date: 3/5/97
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RA FINDING FORM

CR Number: 12	Post Start	Issue No:12-004 Date: 3/5/97
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Issue: Training Plan does not include training in event critiques

Requirement: CM-1-5, "Standard Operating Practices", Section 7.1, Paragraph 4.4 "Training" states "Facility Management shall ensure that, based on a graded approach, staff personnel are adequately trained in event critiques, investigations, and root cause analysis."

References: CM-1-5, "Standard Operating Practices", Section 7.1, Paragraph 4.4 "Training".

Discussion: Review of training records for occurrence reporting personnel and critique leaders revealed that personnel did not have critique training documented. WHC-CM-5-34 Section 1.8 REV 4 "Training Plan" does not require critique training for any SWD personnel. CM-1-5 "Standard Operating Practices", Section 7.1, Paragraph 4.4 "Training" states "Facility Management shall ensure that, based on a graded approach, staff personnel are adequately trained in event critiques, investigations, and root cause analysis."

Conclusion: WHC-CM-5-34 Section 1.8 "Training Plan" must be revised to include critique training for appropriate SWD personnel.

Inspector: John D. Long	Approved: <u>JD Daniels</u> Date: 3/5/97
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RA FINDING FORM

CR Number: 12	Post Start	Issue No: 12-005 Date: 3-5-97
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Issue: Several pieces of equipment and facility components do not meet the labeling requirements as established in WHC-CM-5-34.

Requirement: WHC-CM-5-34, Sec. 3.24, 4.1. "The following components require labeling:

1. Valves and dampers.
2. Instruments and gages.
3. Pipes and vent ducts.
4. Major equipment such as pumps, motors, tanks, etc.
5. Busses, motor control centers and local power panels, breakers, switches, and instrument panels.
6. Room doors.
7. Emergency equipment such as fire alarms, fire brigade lockers, and communication equipment."

Condition: A non-exhaustive walk-through of the applicable portions of the WRAP-1 facility discovered that the following equipment and/or components were not labeled:

1. Second level, the majority of valves and components associated with the 203-P-11-201 glycol heat recovery system.
2. Magnahelic (inches of water) gages on 201A/B process air handlers.
3. Several air handling unit dampers, ducts, and pneumatic actuators.
4. Fire suppression piping throughout the facility.
5. Some inlet/outlet valves, components, and piping on 201A/B process air handlers.
6. Majority of 480 volt switches/boxes, DC boxes, 120 volt boxes on the facility conveyor systems.
7. AS/RS sensors, emergency shutdown cables, electrical boxes and platforms.
8. Drum scale conveyor components, scale, and motor.

Conclusion:

A facility walkdown must be conducted to ensure plant labeling meets the requirements of WHC-CM-5-34.

Inspector: Veitenheimer, SJ

Approved: JI Daniels

Date: 3/6/97

RA FINDING FORM

CR Number: 17	Post Start	Issue No: 17-001 Date: 3/6/97
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Issue: Corrective actions taken did not correct the finding.

Requirement: "Measures taken to correct conditions adverse to quality, safety, or the environment, and, where necessary, to preclude repetition."

References: HNF-CM-5-34 Section 1.22 Rev. 2 Definitions

Discussion: Documentation of the corrective actions taken on WRAP-1 ORR finding 5.3.3 and 13.1.1 did not address all areas of the finding, the root cause did not address the problem, and the corrective actions did not correct the findings.

Conclusion: Management must re-examine the contractor ORR findings and ensure all findings have the proper root cause determinations and adequate corrective actions have been implemented to resolve the root causes of the findings.

Inspector: James J. Allen	Approved: <u><i>J. Daniels</i></u> Date: 3/6/97
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ATTACHMENT 4

OBSERVATIONS

RA OBSERVATION FORM

CR Number: 1	Observation No. 1-001
	Date: 03/06/97

Observation: Facility procedures are not consistent in format.

Requirement: N/A

References: N/A

Discussion: WHC-IP-0673 is used for maintenance procedures as well as operations procedures however the same information is formatted different between the sections. All facility procedures need to be written in the same format and be consistent for human factors concerns.

Conclusion: WHC-IP-0673 should require that the same format be used for all procedures.

Inspector: G.A. Gossell	Approved: <u><i>JH Daniels</i></u>
	Date: 03/06/97

RA OBSERVATION FORM

CR Number: 1	Observation No. 1-002
	Date: 03/06/97

Observation: Two administrative procedures are actually POP's due to requiring operator action.

Requirement: None

References: WHC-IP-0673

Discussion: Administrative procedures contain procedures that are required to be Plant Operations Procedures. Administrative procedures 3.4, Component Line-Ups, and 3.10, Facility Inventory Control require operator actions to do the procedure. Per WHC-IP-0673 these are required to be operating procedures.

Conclusion: Administrative procedures 3.4 and 3.10 should be made into POP's. The requirement to perform should be left in the Administrative procedures.

Inspector: G.A. Gossell	Approved: <u><i>G.A. Gossell</i></u>
	Date: 03/06/97

RA OBSERVATION FORM

CR Number: 1	Observation No. 1-003
	Date: 03/07/97

Observation: Verification process does not contain an administrative review to assure correct formatting.

Requirement: N/A

References: N/A

Discussion: Verification process does not contain an administrative review of procedures to assure that they are in the correct format as required by WHC-IP-0673. The implementation of this observation would be advantageous to the facility and bring consistency to procedures.

Conclusion: Implement an administrative review for all procedures.

Inspector: G.A. Gossell	Approved: <u><i>H. Daniels</i></u>
	Date: 03/07/97

RA OBSERVATION FORM

CR Number: 1	Observation No. 1-004
	Date: 03/06/97

Observation: POP's are labeled with the wrong designator.

Requirement: N/A

References: N/A

Discussion: POP 102 is labeled as a OP 102, Cold Weather Protection however, it is a surveillance and should be labeled as a SV.

Conclusion: Change POP 102 to SV designator.

Inspector: G.A. Gossell	Approved: <u><i>HDaniels</i></u>
	Date: 03/07/97

RA OBSERVATION FORM

CR Number: 2	Observation No 2-001 Date: 3/6/97
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Observation:

Operator certification packages need to be updated to reflect the contents of the most current procedures.

Requirement:

All SWD managers/team leaders are responsible for the following (as applicable): Providing development and review support for training materials; recommending materials(s) for approval.

The plant/facility manager is responsible for the following: Ensuring that the training program and qualifications programs are administered, improved, maintained, and are consistent with and applicable to facility configuration.

References:

WHC-CM-5-34, Section 1.8, 4.1 & 4.2

Discussion:

During interviews with several operators, it was noted that the certification packages need to be updated to match the procedures. This is currently in progress. Operations staff need to understand the importance of filling out the feedback forms and returning them to training to facilitate having correct information in training packages.

Conclusion:

Certification packages must match procedures to ensure that incorrect information is not presented to new operators.

Inspector: Colleen A. Meyers	Approved: <u><i>JDaniel</i></u> Team Leader Date: 3/6/97
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RA OBSERVATION FORM

CR Number: 2	Observation No. 2-002 Date: 3/6/97
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Observation:

Qualification for the performance of OJE is not consistent with industry standards.

Requirement:

For exempt personnel, the satisfactory performance level for any objectively graded written examination is 80 percent. If the average grade is less than 80 percent, the entire examination must be retaken following remedial training, as specified in Section 5.11.

References:

WHC-CM-5-43, Section 1.8, 5.4.6 Grading Standards--Written Examinations

Discussion:

During a review of records, it was noted that a person who is qualified to perform OJE received a score of less than 80% on one section of the final qualification examination. The examination consists of several parts covering different qualifications for operations. WHC-CM-5-34 states that an average score of 80% is the standard, and this is within that standard. Industry standards, however, are such that a person should not be able to perform OJE on that portion of an examination on which he has not received a passing score.

Conclusion:

Clarification is recommended in this portion of WHC-CM-5-34 to bring this issue in line with industry standards.

Inspector: Colleen A. Meyers	Approved: <u>AS Daniel</u> Team Leader Date: 3/6/97
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RA OBSERVATION FORM

CR Number: 4	Observation No. 4-001 Date: 3/6/97
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Observation: The criticality note/warning in WRP1-OP-502 does not state how the 200 gram limit on fissile material is checked.

There is no basis or justification for the 3 day time period associated with discovery of a barrel which places the facility in excess of the inventory limits.

ASA, p. 2-21, p. 2-23. Section 2.7.4 of the ASA states that 4 hose stations are located inside the facility, but section 2.8.2.2 seems to indicate there are only 3.

ASA, p. 3-10,3-11. No basis or justification is given for the acceptability of a 3 day length of time for response.

ASA, p.3-12. Since the WRAP-1 safety management programs are under development only, and do not represent a required commitment, this item 7) should be deleted.

ASA, p. 8-9. The approved ASA references a document which is in draft form only, WHC-IP-1152. Should this in fact be WHC-IP-1252?

Inspector: Michael C. Humphreys	Approved: Team Leader Date: 3/6/97
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RA OBSERVATION FORM

CR Number: 6	Observation No. 6-001
	Date: 3/5/97

Observation:

WHC-CM-5-34 Sect. 1.22 "Corrective Action Management" does not adequately define which corrective actions should be tracked in HATS and which corrective actions should be tracked in WRTS.

Requirement:

A process has been established to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor.

References:

DOE Order 425.1, Startup and Restart of Nuclear Facilities

Discussion:

Solid Waste Disposal (SWD) uses two unique and separate systems to track corrective actions. The first, Waste Remediation Tracking System (WRTS) is a corrective action tracking system used by SWD only. The second, the Hanford Action Tracking System (HATS) is the site wide corrective action tracking system. The intention of having two systems appears to be that WRTS would be used for less significant corrective action items while the more important items would be tracked in HATS.

WHC-CM-5-34 Section 1.22, "Corrective Action Management" states "This procedure establishes Solid Waste Disposal (SWD) requirements and responsibilities for managing adverse conditions tracked in the Hanford Action Tracking System (HATS), which require corrective action. These conditions typically originate from an agency external to SWD or are internally found and require actions to prevent recurrence. Other conditions requiring remedial action, which are not tracked in HATS, are tracked in Waste Remediation Tracking System (WRTS) in accordance with WHC-CM-5-34, Section 1.20, "Waste Remediation Tracking System."

WHC-CM-5-34 Section 1.20, "Waste Remediation Tracking System" states "The purpose of this procedure is to establish criteria and implement requirements for Solid Waste Disposal's (SWD) Waste Remediation Tracking System (WRTS). WRTS consists of action items that are not tracked in the Hanford Action Tracking System (HATS)."

Neither procedure provides further discussion defining which tracking system should be used for tracking a given item.

Conclusion:

Procedures WHC-CM-5-34 Section 1.20, "Waste Remediation Tracking System" and WHC-CM-5-34 Section 1.22, "Corrective Action Management" should be revised to provide adequate definition of the type of items that should be tracked in each system.

Inspector: John D. Long	Approved: <u><i>HN Daniel</i></u> Date: 3/5/97.
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RA OBSERVATION FORM

CR Number: 8a	Observation No.8a-001 Date:3/6/97
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Observation:

Goals, Plans and Objectives are not in place in any document to describe the implementation of training and qualification programs.

Requirement:

Goals, objectives, and plans are in place to describe the implementation of the training and qualification programs.

References:

DOE-STD-1070-94, Guidelines for Evaluation of Nuclear Facility Training Programs, V. Management and Administration of Training and Qualification Programs, Objective 1.0, Criteria 1.3.

Discussion:

DOE Order 5480.20A states that "Evaluation of training and qualification programs shall be conducted using DOE-STD-1070-94." One of the criteria supporting Objective 1.0: "the facility is organized, staffed, and managed to facilitate planning, directing, evaluating, and controlling a systematic training process that supports the facility mission(s)." states that the above requirement must be in place. There is no section in WHC-CM-5-34, Section 1.8, Training Plan that ties this type of information together. Further interviews with facility personnel resulted in no further information as to the existence of this information in any other procedures.

Conclusion:

Goals, Plans and Objectives are not in place in any document to describe the implementation of training and qualification programs.

Inspector: Colleen A. Meyers

Approved: _____

AS Daniels

Team Leader

Date: 3/6/97

RA OBSERVATION FORM

CR Number: 8a	Observation No. 8a-002
	Date: 3/6/97

Observation:

There is no documentation of evaluation of instructor performance for OJT or OJE.

Requirement:

Training Program Evaluation, Objective 8 "A systematic evaluation of training effectiveness and its relation to on-the-job performance is used to ensure that the training program conveys all required skills and knowledge." Criteria 8.2 "Instructional skills and technical competencies of instructors are evaluated regularly." "Instructors are evaluate regularly in all settings in which they instruct by training management, line organization supervision, and peers. The instructors are evaluated against an established set of criteria and the results are used to improve performance."

References:

5480.20A

DOE-STD-1070-94 Training Program Evaluation Objective 8, Criteria 8.2

Discussion:

Evaluation of instructors includes those performing OJT and OJE. There is no documentation of evaluation of instructor performance of OJT or OJE. During interviews it was noted that management has observed OJTs and OJEs but have not formally documented their observations using an established set of criteria so that the results may be used to improve performance.

Conclusion:

When WRAP 1 becomes a nuclear facility, there should be a program in place to cover management evaluations of instructors for both classroom training and OJT/OJE.

Inspector: Colleen A. Meyers

Approved:

Team Leader

Date: 3/6/97

RA OBSERVATION FORM

CR Number: 8a	Observation No. 8a-003 Date: 3/6/97
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Observation:

There is no formal continuing training program.

Requirement:

"Continuing Training Requirements" (1) "...shall be structured commensurate with specific positions needs, and shall be administered on a cycle not to exceed two years. Continuing training shall include, at a minimum, training in significant facility system and component changes, applicable procedure changes, applicable industry operating experience, selected fundamentals with emphasis on seldom used knowledge and skills necessary to assure safety, and other training as needed to correct identified performance problems."

References:

DOE Order 5480.20A, 7., d., (1) (2) (3)

Discussion:

Continuing training is referenced in WHC-CM-5-43, Section 1.8, 5.13. "Continuing training lectures are scheduled and conducted as required." The Continuing Training Program is also referenced in Internal Memo #32630-96.003. "...the WRAP 1 facility will have a Continuing Training program. This program will be tailored to meet the needs of the target audience, (i.e. Operations, Engineering). Training will be tailored to what WRAP personnel request and those subjects Facility Management deems necessary. There is no set continuing training schedule, training will be conducted as deemed necessary by plant management." There are specific topics spelled out in 5480.20A which shall be part of continuing training and continuing training "...shall consist of preplanned classroom-type training,...". The current methodology for satisfying the requirements will not be adequate once WRAP 1 becomes a nuclear facility.

Conclusion:

WRAP 1 must develop a formal continuing training program. It must be scheduled and administered on a biennial cycle to meet the requirements of DOE Order 5480.20A.

Inspector: Colleen A. Meyers

Approved:

Team Leader

Date: 3/6/97

RA OBSERVATION FORM

CR Number: 8c	Observation No. <u>8c-001</u>
	Date: 3/4/97

Observation:

The fork lift operator left a jacket on top of "clean" drums inside the receiving area.

Requirement:

It would be good practice to have a coat rack for such temporary storage.

References:

Radiological Control Manual

Discussion:

Since these drums are surveyed to be less than 1000 dpm/100 cm² beta-gamma and less than 20 dpm/100 cm² alpha, they are not guaranteed to be completely clean. If the coat were left on drums frequently, it might eventually become contaminated to a level which exceeds the limits.

Conclusion:

A coat rack would be a good practice.

Inspector: F. M. Roddy	Approved: <u><i>F. M. Roddy</i></u>
	Date: 3/5/97

RA OBSERVATION FORM

CR Number: 8c	Observation No. <u>8c-002</u>
	Date: 3/4/97

Observation:

The HPT did not wear gloves while performing smears on incoming drums. It would be a good practice to wear them. HPT's did not have gloves while making smears outside during the drill. The only anti-contamination gloves are in the spill kits. There are only four respirators on-site and they are in the emergency response kits. Any reentry response to a high airborne activity event would require obtaining a sufficient number of respirators and cleanup/decon materials from the T Plant. Radcon does not have any radios. They are not able to provide as timely a response to any event without operations personnel with radios alongside them.

Requirement:

Emergency response would be faster and more complete if more equipment were immediately available without having to go to T Plant for supplies.

References:

Radiological Control Manual

Discussion:

Local supplies of emergency PPE's and decon equipment would be preferable.

Conclusion:

Supplies at WRAP would be better than having to go to T Plant to obtain them.

Inspector: F. M. Roddy	Approved: <u><i>F. M. Roddy</i></u>
	Date: 3/5/97

RA OBSERVATION FORM

CR Number: 8c	Observation No. <u>8c-003</u>
	Date: 3/4/97

Observation:

There was no specific procedure for recovery from the airborne radioactivity drill.

Requirement:

Emergency response timeliness

References:

Radiological Control Manual

Discussion:

There should be a procedure for recovery from an emergency such as high airborne radioactivity with checkoff lists as appendices. The HPT's were required to await permission from the control room before initiating the radcon response to the event. If a pre-established procedure were available, then each group would have their own particular checkoff list to follow and could report back status in a more efficient manner.

Conclusion:

A procedure should be developed for recovery from an event. It should utilize checkoff lists to facilitate timely and complete responses.

Inspector: F. M. Roddy	Approved: <u><i>HP Daniels</i></u>
	Date: 3/5/97

RA OBSERVATION FORM

CR Number: 8f	Observation No. 8f-001 Date: 3/6/97
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Observation: All of the documentation reviewed appeared to be detailed, well organized, and in accordance with requirements.

Nuclear Process Operators do not appear to be accustomed to writing Problem Reports. As an example, during the test run, a problem was noted in that the weight display readout was in lb vs. kg, indicating an apparent mismatch in barrel weight vs. the SWITs data. This is obviously a simple software correction, and had not been fixed simply because no PR had been written.

A software/hardware bug was discovered during an attempt to place a barrel in the NDA equipment. This error appeared to be related to a an intermittent handshaking problem between two different hardware/software systems. These types of problems can cause substantial delay, and could be of concern to management relative to productivity. Since they are typically the most difficult to solve, it is not unusual to see them existing at this point in the process.

Inspector: Michael C. Humphreys	Approved: <u><i>JDaniels</i></u> Team Leader Date: 3/6/97
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RA OBSERVATION FORM

CR Number: 8g	Observation No.: 8g-8001 Date: 03/06/97
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Observation: The Forklift Truck Custodian was not familiar with his duties and responsibilities.

Requirement: n/a

References: DOE-RL-92-36, Hanford Site Hoisting and Rigging Manual, Chapter 6, Section 6.3.3.

Discussion: During an interview with the custodian I asked him if he was aware of his duties and responsibilities as described in the above reference, his answer was no he was not. Management is required to appoint someone as the Forklift Truck Custodian, this was done. However of equal or more importance is that Management ensure the designated person understands the roles and responsibilities of the assignment, this was not done.

After the interview was over the Custodian pulled a copy of the Handord Hoisting and Rigging Manual and reviewed the above listed section. He is now familiar with his duties and responsibilities. One of which is to ensure that scheduled maintenance for the forklift trucks is performed as required. This is especially important considering that the maintenance is done by a Fleet Maintenance Organization an outside organization.

Conclusion: Management must ensure that the person designated as the Forklift Truck Custodian understands his roles and responsibilities.

Inspector: Dennis C Humphreys	Approved: <i>HDaniels</i> Date: 3/6/97
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RA OBSERVATION FORM

CR Number: 8g	Observation No.: 8g-002 Date: 03/06/97
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Observation: Forklift Truck preventative maintenance is not being tracked via the facility recall system.

Requirement: n/a

References: DOE-RL-96-32, Hanford Site Hoisting and Rigging Manual, Chapter 6, Section 6.3.3.

Discussion: As described in the referenced section one of the duties and responsibilities of the Forklift Truck Custodian is to ensure that scheduled maintenance/inspection occurs. This maintenance/inspection is done by Fleet Maintenance and not by the facility maintenance personnel. Without a formal way of tracking this the facility cannot be assured that maintenance and inspection is performed as required. Currently the Forklift Truck maintenance and inspection is up to date.

Conclusion: The forklift truck scheduled maintenance/inspection should be added to the established recall system.

Per a report from the forklift truck custodian and the person in charge of the recall system the above described action will be done.

Inspector: Dennis C Humphreys	Approved: <u><i>D. Humphreys</i></u> Team Leader Date: 3/6/97
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RA OBSERVATION FORM

CR Number: 9	Observation No. 9-001 Date: 3/6/97
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Observations:

No initial training is provided for drill team members. This training should include such subjects as drillsmanship.

There is no communications or coordination with the training department regarding drill development and scheduling.

The role of the drill program with regards to continuing training is not adequately defined.

Alarms and communications systems are not adequate to facilitate keeping the personnel in the administration and maintenance buildings informed of conditions. This was addressed in the previous ORR and is in the process of being corrected.

Conduct of the post drill critique was not clearly defined. As examples of this is that no one was taking notes to capture information as it came up.

The drill scenario was not realistic. Assuming that contamination on personnel would not be a problem when a spill was substantial enough to set off a CAM alarm 50 feet away sends the wrong message to facility personnel.

The initiation of the drill was poorly simulated. There was no one in the shipping and receiving area when the drill was initiated and it took awhile for anyone to notice the spill. The simulated spill should have been staged either in the NDE/NDA area or during barrel handling operations in the shipping and receiving area.

There are no drills that assess ability of operations to calculate inventory to be certain of remaining within 80% of the ASA which allows WRAP 1 to maintain its classification as a radiological facility.

Conclusion:

The above listed observations would enhance the drill program and increase its effectiveness.

Inspector: Colleen A. Meyers

Approved:

Team Leader

Date: 3/6/97

RA OBSERVATION FORM

CR Number: 12	Observation No. 12-001 Date: 3/6/97
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Observation: A review of the WRAP-1 facility Standing Order Book revealed the following observations:

1. The WRAP-1 Operations Standing Order policy in the front of the book was not signed by the operations manager.
2. Standing Order 96-001 reflects a policy for balance of plant and process area alarms. The order basically provides information that the process area alarms may energize but can be disregarded since this portion of the facility is not in operation. The Standing Order should specifically list the non-applicable process area alarms.
3. There are currently seven official standing orders. Acknowledgement sheets for standing orders 96-001 and 96-002 were included in the book. Signoffs for standing orders 97-003 and 97-004 were located in the operations required reading book. Acknowledgement documentation for the remaining three standing orders could not be located.

Inspector: Veitenheimer, SJ	Approved: <u><i>H. L. Lant</i></u> Date: 3/6/97
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RA OBSERVATION FORM

CR Number: 17	Observation No. 17-001 Date: 3/6/97
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Observation: WRAP-1 ORR Phase 1 did not adequately assess Core Requirements 1 and 12

Requirement: The breadth, depth and results of the responsible contractor Operational Readiness Review are adequate to verify the readiness of hardware, personnel, and management programs for operations

References: DOE Order 425.1 Core Requirement 17

Discussion: There were 9 findings identified in core requirement 1 and 7 findings identified in core requirement 12

Conclusion: Future ORRs should have more specific objectives to ensure core requirements from Order 425.1 are met.

Inspector: ORR Team	Approved: <u><i>JH Daniels</i></u> Team Leader Date: 3/6/97
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APPENDIX 5
CRITERIA AND REVIEW APPROACH FORMS

RA APPRAISAL FORM

CRA No: CR-1	Criteria Met: NO
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Requirement:

There are adequate and correct procedures and safety limits for operating the process systems and utility systems

Criteria:

- A) Requirements for procedure writing are adequate and provide for human factors concerns.
- B) Procedures are written in accordance with Requirements.
- C) Procedures can be performed as written.
- D) Procedures contain the programmatic and activity specific controls requirements of the Final Safety Classification and Auditable Safety Analysis.

Approach:

- A) Review contractors ORR reviews of the above areas and determine if they adequately covered these areas.
- B) Review contractors writers guide to determine adequacy and that they provided for human factors concerns.
- C) Select and review a minimum of two procedures assessing their conformance to the contractors requirements.
- D) Select two procedures and walk them down with the craft that will perform the procedure to assess their ability to perform the procedure as written.
- E) Review at least two main procedures and two support procedures to assess their incorporation of the programmatic and activity specific controls requirements of the Final Safety Classification and Auditable Safety Analysis.

References:

DOE Order 5480.19,

Records Reviewed:

Contractor ORR report for

WHC-IP-0673, Solid Waste Disposal Technical Procedure Writer's Guide, Rev 3

Plant Operating Procedures WRP1-OP-;

0100, Facility Manual Operation

0101, Real Time Applications Platform (RTAP) Warning Guide

0102, WRAP1 Facility Cold Weather Protection

0501, Operation of the AGV system

0502, Receive, Store and Ship Waste Containers

0503, Move Waste Drums Throughout the WRAP Facility

0506, Operation of the automatic Stacker/Receiver

0707, Operation and Set Point Check of the Orion pH Meter

0903, Drum Non-Destructive Assay (NDA) Automatic Operation

0904, Operating and Emergency Procedure for the Philips 450 kV X-Ray Machine

0905, Passive/Active Neutron Assay Manual Operation

0906, Gamma Energy Assay Manual Operations

0908, Operation of the Drum Non-Destructive Examination System

1101, Operation of the HVAC System

1301, Operation of the Compressed Air System

1601, Operation of the Electrical System

Plant Maintenance Procedures WRP1-;

PMI-1601, UPS Battery Inspection and Filter Change

CI-0701, WRAP 1 Air Sample Rotameter Calibration

CI-1106, WRAP 1 Air Handling Unit Pressure Transmitter Calibration

CI-1701, WRAP 1 Stack Constant Air Monitor Flow Transmitter Calibration

PMI-0501, Drum Jib Crane 101-CR-05-102A Inspection and Service

PMI-0601, WRAP X-Ray Equipment High Voltage Cable Connections

PMI-0901, Airlock Conveyor Inspection, Service and Cleaning

PMI-1001, Fire Rated Damper Inspection

PMI-1101, Air Handling Unit 203-AH-11-101 Lube, Adjustment and Cleaning

PMI-1301, Air Compressors 118-C-13-101A & 118-C-13-101B Inspection and Service

Administrative Manual, HNF-IP-1237 section;

1.6, Conduct of Operations, reviewed matrix for chapter 16

3.1, Equipment and Piping Component Labeling Program

3.4, Component Line-Ups

3.7, Cold Weather Protection Plan

3.10, Facility Inventory Control

3.11, Auditable Safety Analysis (ASA) Matrix

Solid Waste Division Internal Requirements HNF-CM-5-36 section 2.7, Producing an Internal Publication

Controlled copy # 86 of WHC-CM-5-36 located in control room.

Personnel Interviewed:

Operations and Maintenance Manager
Engineering Manager
3 Operators

Evolution's/Operations/Shift Performance Observed:

Walkdown of POP 1301, Operation of the Compressed Air System.
Observed performance of POP OP-102.

DISCUSSION OF RESULTS

Records:

Reviewed WHC-IP-0673 to assess implementation of DOE Order 5480.19 Conduct of Operations chapter 16 requirements.

Reviewed Plant Operating Procedures and Maintenance Procedures for implementation of writers requirements imposed.

Reviewed Plant Operating Procedures and Maintenance Procedures, and Administrative Procedures implementation of Auditable Safety Analysis requirements.

Reviewed Plant Operating Procedures and Maintenance Procedures for operability.

Controlled copy of WHC-CM-5-36 to assess document control.

Interviews:

Operations and Maintenance Manager, discussed the difference between operations and administrative procedures. Discussion centered on administrative procedures 3.4, Component Line-Ups 3.10, Facility Inventory Control. Both procedures require operator actions to perform the function. Procedures are required to be Plant Operating Procedures. Additionally, discussed validation and verification of procedures and if there are any checks on the process. Validation is performed by operator or maintenance personnel by walking procedures down. Verification does not include an administrative review to assure correct format of procedures.

Engineering Manager was interviewed to discuss implementation of

Auditable Safety Analysis (ASA) Matrix. The process for controlling Matrix used the USQD process which is above the requirements of a Radiological facility but does meet the requirements of DOE 5481.1B which requires that changes to the facility are reviewed. Discussion was also held on the Matrix and its inclusion of requirements from attachments to the ASA. The matrix does not address the requirement for quarterly testing the Low Pressure alarm for the dry sprinkler. This requirement is located in attachment 2C of Chapter 2. Engineering manager stated that this was an oversight and will be added to the Matrix.

Observations:

Walkdown of POP PMI-1301, Air Compressors 118-C-13-101A & 118-C-13-101B, procedure stopped at section B step 1. Procedure required slowly opening a valve that was already open per valve lineup performed in section A.

Step 4 of section A states "Verify circuit breaker 17 on PP-11-104..." however the procedure does not tell you where the PP is located and the operator did not know where it was. It was located in the HVAC room on MCC-11-102. When PP was found the breaker schedule did not list the air dryer but gave a circuit designation. The procedure did not list the circuit designation. therefore it was impossible to verify the correct breaker.

Observed performance of POP OP-102, WRAP1 Facility Cold Weather Protection, for the weekly surveillance. Procedure is called a operating procedure however, the procedure is a surveillance and WRAP has surveillance procedures. Material prep room (rm 152) does not show up on surveillance however does have an outside door and has water connections in it. This room should be included in the surveillance. The surveillance does not check doors being shut, insulation on doors installed and not being damaged.

Review Conclusion:

No exemptions were taken in the Conduct of Operations Matrix for DOE Order 5480.19 chapter 16. WHC-IP-0673 does not include all statements from the Order even though no exemption were taken.

WHC-IP-0673 is used for maintenance procedures as well as operations procedures however the same information is formatted different between the sections. All facility procedures need to be written in the same format and be consistent for human factors concerns.

Plant Operating Procedures are not written to the requirements of

WHC-IP-0673. Warning, Cautions and Notes contain action statements which are required to be actual steps. This is not in accordance with WHC-IP-0673 and is a human factors concern.

Plant Operating Procedures and Maintenance Procedures are not written to the requirements DOE Order 5480.19. Warning, Cautions and Notes are not on the same page as the step they pertain to. This is not required by WHC-IP-0673 but is a violation of DOE Order 5480.19 and a human factors concern.

In the review of POP 1301, Operation of the Compressed Air System, question arose on the operability of the POP therefor operations was ask to do a walk through of the procedure. The walk through was stopped at step B.1 due to the operator being required to open a previously opened valve (Valve was opened as part of a valve lineup). The procedure could not be performed as written.

Procedures are not written using the correct nomenclature. During the walkdown of POP 1301 a power panel breaker was required to be shut however the breaker to be closed could not be verified as the correct breaker due to the circuit schedule using what looked like a circuit designation vise the name of the component supplied.

Operating procedure OP-102 weekly surveillance does not check that doors operate properly, weather striping is in place and in good repair, other penetrations into the facility are properly sealed.

Room 152 (Material handling room) is not included in POP 102 although it does have water connections that are susceptible to cold weather.

POP is labeled as a OP however, it is a surveillance and should be labeled as a SV.

Controlled manual HNF-CM-5-34 located in the control room was 5 revisions behind. Table of contents was at 77 and the latest rev at the time was 82.

Administrative procedures contain procedures that are required to be Plant Operations Procedures. Administrative procedures 3.4, Component Line-Ups, and 3.11, Auditable Safety Analysis (ASA) Matrix require operator actions to do the procedure. Per WHC-IP-0673 these are required to be operating procedures.

Verification process does not contain an administrative review of procedures to assure that they are in the correct format as required by WHC-IP-0673.

Review of Auditable Safety Analysis to Administrative Manual, HNF-IP-1237 section, 3.11, Auditable Safety Analysis (ASA) Matrix provided objective evidence that ASA requirements had procedures implemented to satisfy the requirement. However, ASA commitment from chapter 2 appendix 2c, for quarterly check when weather conditions are below 40 F. is not included in the matrix.

Issue(s):

1. Controlled manual is not up to date with latest revision. Finding 001.
2. Procedure can not be performed as written. Finding 002.
3. Plant Operating Procedures (POP) are have action statements in Warning, Cautions and Notes and missing subsequent steps. Finding 003.
4. Auditable Safety Analysis Matrix from Administrative manual does not contain all requirements from the ASA. Finding 004.
5. Not all spaces required to be checked for cold weather protection are included in weekly surveillance. Finding 005.
6. Procedures are not written using the correct nomenclature available. Finding 006.
7. Weekly cold weather protection surveillance is inadequate. Finding 007.
8. WHC-IP-0673 does not include all statements from DOE Order 5480.19 chapter 16. Finding 008.
9. POP's and Maintenance Procedures are not written in accordance with DOE Order 5480.19 chapter 16. Finding 009.
10. Facility procedures are not consistent in format. Observation 001.
11. Two administrative procedures are actually POP's due to requiring operator action. Observation 002.
12. Verification process does not contain an administrative review to assure correct formatting. Observation 003.
13. POP's are labeled with the wrong designator. Observation 004.

Inspected by: G.A. Gossell

Approved by: J. Daniels

ORR Team Leader

Date: 3/6/97

RA APPRAISAL FORM

CRA No: CR-2

Criteria Met: Yes

Requirement:

Training and qualification programs for operations and operations support personnel have been established, documented, and implemented (the training and qualification program encompasses the range of duties and activities required to be performed)

Criteria:

Procedures are developed and implemented that describe the qualification process, including examinations for certification of operations, re-qualification, maintenance of proficiency, granting of exceptions and extensions. (5480.20A)

Classroom training is conducted in accordance with formal lesson plans based on established learning objectives. Written and oral examination are used to evaluate trainee comprehension of training content. (5480.20A)

Training programs incorporate formal on-the-job (OJT) and hands-on evaluation of skills. (5480.19)

The qualification program includes requirements for successful completion of written, oral, and operational evaluations for operations. (5480.20A)

Approach: Review the WRAP-1 ORR in this area for compliance with the above criteria

Record Reviews: Review Training and Qualification Records for Operators, Shift Technical Engineers, PICs, and Supervisors. This includes results of oral, written, and operational evaluations. Ensure that the training program is being formally administered and controlled. Ensure that training records are maintained in an auditable manner and support management information needs by providing required data on each individual's training participation, performance, and qualification/certification.

Review the evaluation/self assessment program for involvement by facility and training management in program, instructor (classroom and OJT), and training materials assessment.

Review the remedial training program for adequacy.

Interviews: Interview training personnel responsible for continuing training, and drill scenario development and implementation. Interview personnel responsible for establishing training needs for operations personnel

Interview Operations personnel, including the Operations manager and Team Leaders, the Shift Manager, and WRAP operators.

References: DOE Orders 5480.19 & 5480.20A

Records Reviewed:

Training field files; Individual Training Plans; Qualification cards; Qualified Personnel Status Report; Examinations; WHC-CM-5-34, Section 1.8, Rev. 4 Solid Waste Disposal Operations Administration Training Plan; WRAP 1 Technical Staff Training Requirements Checklist; WRAP 1 Person-In-Charge Training Requirements Checklist; Solid Waste Disposal SRIDs Chapter 4 Training and Qualification; WHC-CM-5-34 Section 3.10, Rev. 2 Solid Waste Disposal Operations Administration, On-The-Job-Training; WHC-IP-1237, 1.4, Rev. 0 Training Implementation Matrix (TIM); WHC-CM-5-34 Section 1.5, Rev. 0, Solid Waste Disposal Operations Administrations, Emergency/Operational Drill Program; FY97 WRAP 1 Emergency/Operations Drill Schedule.

Personnel Interviewed:

Training Manager, Training Instructor, Operations and Maintenance Manager, 2 Operations Team Leaders, 3 qualified NPOs, 2 NPOs in training for qualification, 1 electrician, 1 instrument specialist, 1 Ops engineer, Startup manager, training records administrator, drill program coordinator.

Evolutions/Operations/Shift Performance Observed:

Operations Drill

DISCUSSION OF RESULTS

Records:

Records were adequate to determine that training and qualification programs for operations and operations support personnel have been established, documented, and implemented (the training and qualification program encompasses the range of duties and activities required to be performed)

Interviews:

The personnel interviewed were extremely cooperative, helpful and supplied all the documentation requested.

Observations:

Observed the performance of a facility drill to evaluate the effectiveness of operations training in a drill scenario.

Review Conclusion:

Based on review of documents, interviews with personnel and observations, operator certification packages need to be updated to reflect the contents of the most current procedures; qualification for the performance of OJE is not consistent with industry standards; and an exception to the education requirements were not adequately documented. Training and qualification programs for operations and operations support personnel have been established, documented, and implemented to support startup of WRAP-1 phase 1. The training and qualification program encompasses the range of duties and activities required to be performed.

Issue(s):

2-001 An approved RL-OTR procedure was not used to document an exception to the education requirement called out in the Training Implementation Matrix (TIM) WHC-IP-1237.

Inspected by: Colleen Meyers	Approved by: ORR Team Leader Date: 3/6/97
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RA APPRAISAL FORM

CRA No: CR-3	Criteria Met: Yes
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Requirement:

Level of knowledge of operations and operations support personnel is adequate based on reviews of examinations and examination results, and selected interviews of operating and operations support personnel.

Criteria:

The level of operator knowledge is adequate to operate safely.

Operations personnel retain a practical and adequate understanding of facility systems and operations. These personnel also give attention to and retain an adequate knowledge of health, safety and environmental protection issues.

Operators demonstrate the ability to carry out normal, abnormal, and emergency procedures.

Operators demonstrate a working knowledge of facility systems and components related to safety.

Entry-level requirements are established for each operations position and includes as applicable the minimum education, experience, technical, and medical requirements.

Approach:

Review;

Review the WRAP-1 ORR in this area for compliance with the above criteria

Record Review:

Review examinations to determine if they adequately test the operators understanding of technical fundamentals, facility systems, and operating procedures.

References:

DOE Order 5480.19
DOE Order 5480.20A

Records Reviewed:

WRAP-1 ORR Phase 1 Final Report
Training Records (6)
Corrective Action Plan for Finding 2&3.1

Personnel Interviewed:

Operations Manager
Operations Training Instructor
Team Leader (2)
Operators (3)
Maintenance Technicians (3)
Operators in Training (2)

Evolutions/Operations/Shift Performance Observed:

Receipt/Storage/NDE/NDA of Drums
Drill (CAM Alarm with Radioactive Spill)
Lockout and Tagout of Equipment

DISCUSSION OF RESULTS

Records:

Reviewed the WRAP-1 ORR Phase 1 Final Report to determine the adequacy of the review. Reviewed the training records of managers/supervisors and operators to determine if they adequately test the operators understanding of technical fundamentals, facility systems, and operating procedures and to determine if entry levels were met. Reviewed the Corrective Action Plan to determine if the actions taken to correct finding 2&3.1 addressed the finding and was adequate.

Interviews:

Interviewed the operators, maintenance technicians, supervisors, and management to evaluate their level of knowledge of technical fundamentals, facility systems, and operating procedures.

Observations:

Observed the performance of the Receipt, Storage, NDE, and NDA of Drums, the performance of a drill (CAM Alarm with Radioactive Spill), and the performance of the lockout and tagout of equipment to evaluate the operators ability to adequately perform normal and emergency operations.

Review Conclusion:

Based on the interviews conducted, records reviewed, and activities observed the level of knowledge of the operators, maintenance technicians, supervisors, and management is adequate to safely operate, manage, and maintain the WRAP-1 facility.

Issue(s):

None

Inspected by: James J. Allen

Approved by:

J. Daniels
ORR Team Leader

Date: 3/5/97

RA APPRAISAL FORM

CRA No: CR-4	Criteria Met: Yes
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Requirement:

Facility safety documentation is in place that describes the "safety envelope" of the facility. The safety documentation should characterize the hazards/risks associated with the facility and should identify mitigating measures (systems, procedures, administrative controls, etc.) that protect workers and the public from those hazards/risks. Safety systems and systems essential to worker and public safety are defined and a system to maintain control over the design and modification of facilities and safety-related utility systems is established.

Criteria:

Nuclear safety documentation per DOE Orders 5480.23 and 5481.1b, as appropriate, is in place and signed by appropriate approval authority. Safety documentation clearly encompasses activities being reviewed. All associated hazards are adequately identified, categorized, evaluated and controlled in the safety documentation. All systems for which credit is taken to mitigate or prevent significant off-site consequences in the safety analyses are properly identified and classified as safety class. Appropriate maintenance, surveillance and control measures are identified for all safety class equipment consistent with safety analysis assumptions. A process that ensures that Authorization Basis Impacts are addressed has been established. This program shall address discoveries, tests, and changes raised concerning facility authorization.

Approach:

- A) Review Contractor's ORR review of safety documentation to determine both adequacy and depth of review.
- B) Review prevention, control and mitigation features included in the safety documentation to ensure that hazards will be adequately managed, and that they are adequately implemented in operating procedures.
- C) Review operating procedures to ensure that safety class equipment is properly maintained, surveilled and controlled.
- D) Review activities being authorized to ensure that all associated hazards are adequately described, analyzed and controlled in the safety documentation.

- E) Verify that programs are defined, and procedures are in place to specify methods for identifying, addressing, and reconciling questions concerning alterations to the design, function, or method of performing the function of a structure, system, or component described as the authorization basis.
- F) Interviewing individuals responsible for implementing TSRs / administrative controls in procedures, and individuals responsible for maintaining operation of the facility within the Authorization Basis.

References:

DOE Orders 5480.23 and 5481.1b
 DOE-EM-STD-5502.94
 DOE-STD-1027-92

Records Reviewed:

Reviewed WRAP1 Auditable Safety Analysis.
 Reviewed the Auditable Safety Analysis (ASA) Matrix, WHC-IP-1237, Release 15, Section 3.11, Rev. 0.
 Selected Implementing Procedures.

- 1) HNF-IP-1262, WRAP1 Building Emergency Plan
- 2) HNF-IP-0263-WRP1, WRAP1 Building Emergency Guide

Personnel Interviewed:

Control Room Nuclear Process Operators(2)
 Engineer (1)
 Manager (1)

Evolutions/Operations/Shift Performance Observed:

- 1) From the control room, observed the receipt, movement, NDE / NDA of test barrels. This included observation of control room operator communications with local operators troubleshooting efforts.

DISCUSSION OF RESULTS

Records:

Performed spot checks of implementation as indicated on the ASA Matrix. No problems were identified, items were implemented as indicated on the Matrix. With the exception of the items noted below, no other omissions or deficiencies were noted with respect to the content of the Matrix vs. the ASA.

Interviews:

Questioned the operator on how the Criticality note/warning on p. 7 of WRP1-OP-502 would be checked. The response indicated that it would be indicated on the barrel, and on form 1 (by summing the FGE columns), after some prompting. No other problems noted.

Review Conclusion:

The ASA establishes an adequate authorization basis for operation of WRAP1 as a radiological facility. The established authorization basis is adequately implemented in the operating procedures. This conclusion should be construed as preliminary only, however, since the authorization basis for a radiological facility is only a subset of the authorization basis which will be required for Phase II.

Issue(s):

None

Inspected by: Michael C. Humphreys	Approved by: <u>JD Daniels</u> ORR Team Leader Date: 3/6/97
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RA APPRAISAL FORM

CRA No: 5	Criteria Met: Yes
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Requirement:

A program is in place to confirm and periodically reconfirm the condition and operability of safety systems, including safety related process systems and safety related utility systems. This includes examinations of records of tests and calibration of safety system and other instruments which monitor limiting conditions of operation or that satisfy Technical Safety Requirements. All systems are currently operable and in a satisfactory condition.

Criteria:

1. Safety systems are identified and documented. Procedures for operating these systems have been adequately reviewed, approved, and implemented.

Approach:

1. Safety Systems.
 - a. Determine if each safety system has appropriate limits identified and is incorporated into a surveillance program that adequately verifies compliance. Review the surveillance program to assess the mechanism used for reporting results, and dispositioning deficiencies.
 - b. Review completed surveillance reports to determine if acceptance criteria are established and being met and if the surveillance program is effectively implemented and managed.
 - c. Interview appropriate facility staff to determine if the surveillance program is effectively implemented and managed.
 - d. Walk down selected safety systems with operating procedures to assess accuracy/usability of the procedures.

References:

DOE Order 4330.4B

Records Reviewed:

Orr report, ORR findings and corrective actions.

Personnel Interviewed:

Operations & Maintenance Manager
Operator
Maintenance PIC
Duty Operations Supervisor

Evolutions/Operations/Shift Performance Observed:

Receipt and NDE/NDA of barrels.

DISCUSSION OF RESULTSRecords:

The facility does not have any identified Safety Systems in Phase 1.

ORR Findings and corrective actions were reviewed to determine adequacy of closure..

Interviews:

Interview with the Operations & Maintenance Manager indicate that the facility has configuration control and performs surveillance for systems important to operation.

Review Conclusion: The facilities control of systems important to operation is adequate for Phase 1 start up.

Issue(s):

None

Inspected by: K Harris

Approved by:

ORR Team Leader

Date: 3/6/97

RA APPRAISAL FORM

CRA No: CR-6	Criteria Met: Yes
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Requirement:

A process has been established to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor.

Criteria:

A process should be in place to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor.

Approach:

Verify that a process to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor is adequate and implemented for the scope of this review.

References:

DOE Order 425.1, Startup and Restart of Nuclear Facilities

Records Reviewed:

Waste Remediation Commitment Tracking System, Printout of Items Entered as of 2/20/97

WHC-CM-5-34 Solid Waste Disposal Operations Administration, Section 1.20 REV 3, Waste Remediation Tracking System

WHC-CM-5-34 SOLID Waste Disposal Operations Administration, Section 1.22 REV 2, Corrective Action Management

Personnel Interviewed:

Startup Manager
Shift Operations Manager

Evolution's/Operations/Shift Performance Observed:

None

DISCUSSION OF RESULTS

Records:

Review of Waste Remediation Commitment Tracking System (WRTS) revealed several items which could have been entered in the Hanford Action Tracking System (HATS).

Interviews:

The personnel interviewed were adequately knowledgeable of the areas being assessed. They were cooperative and supplied procedures reviewed for this assessment.

Observations:

WHC-CM-5-34 Sect. 1.22 "Corrective Action Management" does not adequately define which corrective actions should be tracked in HATS and which corrective actions should be tracked in WRTS.

Review Conclusion:

An adequate process has been established to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor for facility operations to commence.

Issue(s):

None

Inspected by: John D. Long	Approved by: <u>JD Daniels</u> ORR Team Leader Date: 3/5/97
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RA APPRAISAL FORM

CRA No: CR-7	Criteria Met: Yes
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Requirement:

A systematic review of the facility's conformance to applicable DOE Orders has been performed, any non-conformance have been identified, and schedules for gaining compliance have been justified in writing and formally approved.

Criteria:

1. A process is in place to systematically review applicability and conformance with DOE Orders which identifies nonconformances, schedules for gaining compliance, and written justification and approval of compliance schedules and exemptions.
2. Schedules for gaining compliance with nonconformances and any associated compensatory measures provide adequate protection of public health and safety.

Approach:

1. -Review contractor ORR in this area to verify compliance with the above criteria.

-Review assessments of the Order compliance program which evaluated the adequacy of the system for identification of new order requirements, analysis of applicability of Order requirements, establishing implementation schedules, assessing compliance, documenting nonconformances, and developing schedules for gaining compliance.

-Review the procedures for conducting DOE Order compliance reviews.

-Review three Orders to determine if they are being implemented and followed.
2. -Review contractor ORR in this area to verify compliance with the above criteria.

-Review assessments of the Order compliance program which evaluated the adequacy of the process for developing schedules for gaining compliance with identified noncompliances and the process for identifying adequate compensatory measures.

- Review identified non-compliances and schedules for gaining compliance with DOE Orders.

- Interview facility management to determine awareness of DOE Order non-compliances and compensatory actions.

- Interview selected operations, engineering, and support personnel to determine awareness of non-compliances and compensatory actions.

- Observe operations and determine whether compensatory actions are adequately implemented.

References:

DOE Order 425.1, 9-25-95, Startup and Restart of Nuclear Facilities

Records Reviewed:

HNF-CM-5-34
HNF-CM-5-36
WHC-IP-1237
WHC-IP-1120
RUST WRAP-1 ORR

Personnel Interviewed:

Plant Manager
Plant Startup Manager
Plant Engineering Manager
RUST Manager of Conduct of Operations

DISCUSSION OF RESULTS

Records:

The records reviewed were adequate to verify that compliance with DOE Orders is satisfactory and that reviews, updates and noncompliances to the Orders is accomplished.

Interviews:

The personnel interviewed were cooperative, helpful, and proficient in supplying requested information.

Review Conclusion:

The compliance to orders is accomplished via the S/RID process and appears to be adequate. The upcoming S/RID revision (reference WPD memo 9751408 T. K. Teynor to H. J. Hatch) to have a master RUST S/RID and then each RUST facility having a specific S/RID appendix that is tailored to the individual facility's needs will greatly improve the process.

Issues:
None

Inspected by: Larry D. Earley

Approved by:

L. Daniels
ORR Team Leader

Date: 3/6/97

RA APPRAISAL FORM

CRA No: CR-8a (Training)	Criteria Met: Yes
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Requirement:

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services, training, maintenance, radiological protection and health physics, emergency preparedness, fire protection, engineering, and computer software, are adequate for operations;

Criteria:

Adequate procedures are developed and implemented that describe the qualification process, and the training requirements for WRAP-1 facility personnel.

A sufficient number of qualified personnel are provided to ensure that adequate training is provided and effectively tracked to provide for safe operations.

Adequate facilities and equipment are available to facilitate training of personnel for safe operations.

Approach:

Review the Training Implementation Matrix to ensure adequacy of the management program for implementation of DOE Order 5480.20A.

Review Training and On-the-Job Training procedures for adequacy to be certain they support the WRAP-1 Training Implementation Matrix (TIM).

Interview training, operations, and management personnel to determine if training needs are being met.

Interview training manager and training records administrator to ensure effective tracking of training requirements is implemented.

Interview a cross section of all facility personnel to determine if facilities and equipment are adequate for effective training.

Records Reviewed:

Training field files; Individual Training Plans; Qualification cards; Qualified Personnel Status Report; Examinations; WHC-CM-5-34 Section 1.8, Rev. 4 Solid Waste Disposal Operations

Administration Training Plan; WRAP 1 Technical Staff Training Requirements Checklist; WRAP 1 Person-In-Charge Training Requirements Checklist; Training and Qualification; WHC-CM-5-34 Section 3.10, Rev. 2 Solid Waste Disposal Operations Administration On-The-Job-Training; Training Implementation Matrix (TIM).

Personnel Interviewed:

Training Manager; Maintenance Manager; 2 Operations Team Leaders; 3 qualified NPOs; 2 NPOs in training for qualification; 1 electrician; 1 instrument specialist; 1 Ops engineer; Startup manager; training records administrator.

Evolutions/Operations/Shift Performance Observed:

None

DISCUSSION OF RESULTS

Records:

Records were adequate to determine that management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure training is adequate for operations.

Interviews:

The personnel interviewed were extremely cooperative, helpful and supplied all the documentation requested.

Review Conclusion:

Based on documents reviewed and interviews the management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure training is adequate for operations. The post start finding must be corrected prior to the phase 2 readiness review. The following observations are identified: Goals, Plans, and Objectives are not in place in any document to describe the implementation of training and qualification programs; and there is no documentation of evaluation of instructor performance for OJT or OJE.

Issue(s):

8-001 There is no evidence of a formal PIC training program.

8-002 Managers are unaware of their responsibility to "... ensure that visitors, contracted personnel, and temporary personnel are trained to the extent necessary to safely execute their duties."

Inspected by: Colleen Meyers

Approved by:

Date: 3/6/97

ORR Team Leader

RA APPRAISAL FORM

CRA No: 8b (Maintenance)	Criteria Met: Yes
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Requirement:

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services, training, maintenance, radiological protection and health physics, emergency preparedness, fire protection, engineering, and computer software, are adequate for operations;

Criteria:

1. Facility Maintenance program is adequate to ensure the sustained operability of the WRAP.

Approach:

1. Maintenance Program. Review applicable aspects of the facility maintenance program to ensure its capability of supporting the continued operation of the WRAP. As a minimum, aspects should include:

- Instrument calibration and instrument recall system, including measuring and test equipment (M&TE)
- Tools and Equipment,
- Maintenance planning and scheduling (Job Control System),
- Availability of Master Equipment List,
- Preventive maintenance program, and
- Adequacy of spare parts.

References:

DOE Order 4330.4B

Records Reviewed:

JCS program
Calibration/PMS recall

Personnel Interviewed:

Operations & Maintenance Manager
Maintenance PIC

Evolutions/Operations/Shift Performance Observed:

Setup for Ventilation Maintenance

DISCUSSION OF RESULTSRecords:Interviews:

The Facility has a Maintenance Implementation Plan (MIP) that has been submitted to DOE for approval but has not yet been approved. The MIP is not a requirement until the facility is categorized as nuclear. They are working to the MIP and have developed the Maintenance program to meet the MIP.

Observations:

During the HVAC work the PIC reported first to the control room to check status of the equipment, and inform operations of the work to be performed, the work package was being followed, and personnel were knowledgeable of the equipment and the work.

Review Conclusion:

The maintenance program is adequate for Phase 1 startup.

Issue(s):

None

Inspected by: K Harris

Approved by:

ORR Team Leader

Date: 3/6/97

RA APPRAISAL FORM

CRA No: CR 8c (Radiological Protection and Health Physics)	Criteria Met: Yes
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Requirement:

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure radiological protection and health physics are adequate for operations.

Criteria:

The radiological protection organization is established and functioning to support the operations organization. Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented. It has adequate facilities and equipment and is adequately staffed with qualified personnel who are knowledgeable of facility operations and hazards. These personnel also give adequate attention to health, safety and environmental protection issues.

The radiological protection program (or approved implementation plan) meets or exceeds the requirements of DOE 5400.5, DOE 5480.11, 10CFR835, site Radiological Control Manual, and the DOE Radiological Control Manual in the following areas:

- o Radioactive material control requirements,
- o Internal and external dose controls,
- o Contamination controls,
- o Access controls to radiological controlled areas,
- o Radiological Work Permits (RWP),
- o Radiological postings,
- o Personnel monitoring,
- o Facility surveys and radiological control instrumentation,
- o ALARA considerations, including annual dose goals and radiation safety performance indicators, and
- o Identification and tracking of radiological control deficiencies.

The radiation protection program appropriately implements the site Radiological Control Manual; addresses the radiological hazards unique to the facility for normal and abnormal conditions; and conducts evaluations for improvement and corrective actions.

Verify that the corrective actions for the site ORR findings in the area of radiation protection (if any) have been implemented or that a schedule has been established. (CORE REQUIREMENT 17)

Operations and radiological control personnel demonstrate the ability to carry out their radiological control responsibilities during normal, abnormal, and emergency procedures. Operations personnel demonstrate a working knowledge of radiological safety requirements associated with facility systems and components. Operations and radiological control personnel are knowledgeable of radiological requirements and principles contained in DOE 5480.11, the DOE Radiological Control Manual, 10CFR835 and local radiological control policies/procedures. Operations and radiological control personnel have received training required by the DOE Radiological Control Manual, the site Radiological Control Manual and 10CFR835.

Approach:

Record Review: Review the documentation (e.g., administrative procedures, organizational charts, position descriptions, or internal memoranda) which establish the roles, responsibilities, interfaces, and staffing levels for the radiological control organization that supports operations. Review training records or other documentation that demonstrates radiological control personnel have an adequate knowledge of facility operations and hazards. Review the records and program procedures to spot check the radiological control program for the items identified above. Review records of radiation protection evaluations of off-normal occurrences as well as the corresponding corrective actions.

Review personnel training records for adequacy and completeness in the areas of facility radiological procedures and radiological controls related to systems and activities under the workers' cognizance.

Interviews: Interview two radiological control personnel and the radiological control supervisor that supports operations to determine if they are familiar with their roles, responsibilities, and interfaces with the operations organization. Interview these personnel to determine if their level of knowledge of plant operations and hazards is adequate. Evaluate their understanding of radiological control program elements identified above. Interview at least two operations and

two radiological control personnel to assess their understanding of their actions when responding to abnormal and emergency radiological conditions and facility hazards. Determine if these personnel have an adequate level of knowledge required in the DOE Radiological Control Manual, the site Radiological Control Manual and 10CFR835.

Shift Performance: While observing evolutions and drill response (if possible), determine if radiological control personnel assigned to operations are providing adequate support to the operations organization; and evaluate whether they are giving adequate attention to health, safety and environmental protection issues. At least one evolution and/or drill should be conducted (if possible) to assess specifically those items identified in the criterion listed above. Observe the radiological protection facilities and equipment and assess their adequacy to support operations. Observe radiological control personnel perform a survey at the facility.

If possible, observe drills, routine operations and maintenance evolutions to assess the ability of operations personnel to safely operate systems and components under their cognizance within prescribed radiological control guidelines.

References:

DOE Order 5400.5, Radiation Protection of the Public and the Environment

DOE Order 5480.4, Environmental Protection, Safety and Health Protection Standards

DOE Order 5480.11, Radiation Protection for Occupational Workers

DOE Radiological Control Manual, EH-0256T of April 1994, Rev. 1

10CFR835, Occupational Radiation Protection

Hanford Site Radiological Control Manual

Records Reviewed:

WRP1-OP-0501/A-3 Operation of the AGV System

WRP1-OP-0502/A-7 Receive, Store, and Ship Waste Containers

WRP1-OP-0503/A-4 Transport Drums Within WRAP-1

WRP1-OP-0506/A-4 Operation of the Automated Stacker/Retriever

WRP1-OP-0903/A-3 Drum NDA Automatic Operation

WRP1-OP-0904/A-0 Operating and Emergency Procedure for the Philips 450 kV X-Ray Machine

WRP1-OP-0905/A-3 Drum IPAN Manual Operation

WRP1-OP-0906/A-3 Drum GEA Manual Operation

WRP1-OP-0908/A-0 Operation of the Drum NDE System

WRP1-OP-1101/A-4 HVAC System Operation

WRP1-OP-1201/A-1 Radioactive Material Shipment and Receipt Surveys

WRP1-OP-1202/A-1 Gross Alpha and Beta Counting Instruments

WRP1-OP-1203/A-0 Radioactive Source Inventory and Leak Test

WRP1-OP-1204/A-1 Radiological Alarm Response

WRP1-OP-1206/A-1 Radiation Generating Device Survey

WRP1-OP-1207/A-0 Radon/Thoron Mitigation

WRP1-OP-1208/A-0 AMS-3 Beta Continuous Air Monitoring

WRP1-OP-1209/A-0 Release Survey

WRP1-OP-1210/A-0 Personnel Decontamination

WRP1-OP-1211/A-0 Personal Effects Decontamination

WRP1-OP-1212/A-1 Inspection and Survey of HEPA Vacuum Cleaners

WRP1-OP-1215/A-1 Alpha Continuous Air Monitoring

WRP1-OP-1217/A-0 Personnel Survey Device (PSD) Inspection and Source Check

WRP1-OP-1218/A-0 Portable Instrumentation Program

WRP1-OP-1219/A-0 Establishing Personnel Dose Rates

WRP1-SV-1706/B-1 Weekly Surveillance of Waste

WRP1-SV-1707/A-0 Packaging Hazardous Waste

WRP1-SV-1708/A-0 Packaging Low-Level Waste

WRP1-SV-1709/A-0 Packaging Mixed Waste

WRP1-AR-1200/A-1 Radiological Control Alarm Response

Radcon personnel training records

Health Physics surveys

Emergency drill critiques

Scheduled Radiological Survey Task Descriptions

Personnel Interviewed:

Acting Radcon Manager

Lead HPT

2 HPT's

NDE Engineer

NDA Engineer

Radiographer

5 Operators

Evolution's/Operations/Shift Performance Observed:

Offloading drums

Stacking drums

Loading drums onto automatically guided vehicle (AGV)

Loading drums into x-ray, gamma and neutron analyses equipment

Spill/high airborne radioactivity drill

DISCUSSION OF RESULTS

Records:

The procedures are in compliance with 10CFR835 and the Radcon Manuals, both DOE and Hanford Site. The training records are up-to-date. The procedures, organization and staffing level for radcon are adequate to support operations. The training and experience levels of radcon personnel show adequate knowledge of facility operations and hazards for the areas considered for this readiness assessment. The procedures and the radcon program are adequate to support operations at WRAP. The radcon response to drill scenarios has been adequate. The radcon personnel training records and experience are sufficient to support WRAP operations.

Interviews:

The acting radcon manager and the health physics technicians (HPT's) were fully aware of their roles, responsibilities, and interfaces with operations and felt that operations should allow them greater freedom to respond more quickly to emergencies. The

knowledge level of these personnel and the NDE/NDA engineers of plant operations and hazards is adequate. The radcon personnel's understanding of the radcon program is adequate. The response of the radcon and operations personnel to the drill was adequate. Operations personnel assisted radcon personnel in radcon activities during the drill. The knowledge of personnel of 10CFR835 and the radcon manuals was satisfactory.

Observations:

The fork lift operator left a jacket on top of "clean" drums inside the receiving area. Since these drums are surveyed to be less than 1000 dpm/100 cm² beta-gamma and less than 20 dpm/100 cm² alpha, they are not guaranteed to be completely clean. If the coat were left on drums frequently, it might eventually become contaminated to a level which exceeds the limits. It would be good practice to have a coat rack for such temporary storage.

NDA operator properly warned personnel to stay at a distance while NDA equipment was operating.

HPT did not wear gloves while performing smears on incoming drums. It would be a good practice to wear them. The only anti-contamination gloves on-site are in emergency response kits.

Drums on pallet are not wrapped to prevent falling off.

The flat spot on the receiving platform is not large enough to permit safe transfer of pallet from fork-lift to fork-lift when receiving drums. Drums could fall. A plywood stand outside the building at the roll-up door would be sufficient.

Pins on the receiving steel pallet are capable of puncturing drums on bottom. Pins are not required and should be cut off.

Area monitor locations are appropriate for the intended functions, contrary to the facility ORR. One is to warn personnel of an excessively hot drum at the receiving door and the other is behind the shield to measure what the jib crane operator receives.

There is extra manual handling of drums with consequent potential for dropping them and receiving higher doses. This occurs between receipt, stacking, unstacking and placement on the AGV loader.

Drill observations:

Radcon did not have a sufficient number of inserts for the signs stating that respirators were required for entry during a high

airborne radioactivity event. There are only four respirators on-site and they are in the emergency response kits. Any reentry response to a high airborne activity event would require obtaining a sufficient number of respirators and cleanup/decon materials from the T Plant. Radcon does not have any radios. They are not able to provide as timely a response to any event without operations personnel with radios alongside them. HPT's did not have gloves while making smears outside during the drill. Again, the only anti-contamination gloves are in the spill kits. There should be a procedure for recovery from an emergency such as high airborne radioactivity with checkoff lists as appendices. The HPT's were required to await permission from the control room before initiating the radcon response to the event. If a pre-established procedure were available, then each group would have their own particular checkoff list to follow and could report back status in a more efficient manner.

Radcon personnel are providing adequate support to operations during normal evolutions and drills and give adequate attention to health, safety and environmental protection issues. The operations personnel can safely operate systems and components in the WRAP within the radcon requirements.

Review Conclusion:

The WRAP radcon program is adequate for operations of the receiving and shipping and NDE/NDA areas evaluated during this readiness assessment.

Issue(s):

There were no findings in radcon. There were observations which are reported separately.

Inspected by: F. M. Roddy	Approved by: <u><i>A. Danich</i></u> ORR Team Leader Date: 3/5/97
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RA APPRAISAL FORM

CRA No: CR-8 D (Emergency Preparedness)	Criteria Met: Yes
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Requirement:

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services, training, maintenance, radiological protection and health physics, emergency preparedness, fire protection, engineering, and computer software, are adequate for operations.

Criteria:

Programs should be established, sufficient numbers of qualified personnel should be provided, and adequate facilities and equipment should be available to ensure emergency preparedness is adequate for operations.

Approach:

Verify that a program has been established and implemented to ensure that emergency preparedness is adequate for the scope of this review.

References:

DOE Order 425.1, Startup and Restart of Nuclear Facilities

Records Reviewed:

HNF-IP-0263-WRP1 Rev 2, Building Emergency Plan for WRAP 1
HNF-IP-1262 Rev 0, Building Emergency Guide for WRAP 1

Personnel Interviewed:

Startup Manager
Shift Operations Manager
Building Emergency Director

Evolution's/Operations/Shift Performance Observed:

None

DISCUSSION OF RESULTS

Records:

The procedures reviewed were adequate to support facility operations.

Interviews:

The personnel interviewed were adequately knowledgeable of the areas being assessed.

Observations:

None

Review Conclusion:

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure emergency preparedness is adequate for facility operations.

Issue(s):

None

Inspected by: John D. Long	Approved by: <u>AL Daniels</u> ORR Team Leader Date: 3/5/97
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RA APPRAISAL FORM

CRA No: CR-8 F (Computer Software)	Criteria Met: Yes
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Requirement:

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services, training, maintenance, radiological protection and health physics, emergency preparedness, fire protection, engineering, and computer software, are adequate for operations;

Criteria:

- A. Computer programs used for design analysis have been verified to show that they produce correct solutions for the encoded mathematical model within defined limits for each parameter employed; and that the encoded mathematical model has been shown to produce a valid solution over the range of application to the physical problem associated with the particular application.
- B. Computer programs are controlled to assure that changes are documented and approved by authorized personnel. The development, acquisition, use, modification and configuration management of software used in computer systems is in accordance with QR 19.0, Software Quality Assurance Requirements.

Approach:

- A) Review Contractor's ORR review of safety documentation to determine both adequacy and depth of review.
- B) Review software quality assurance plans and documentation to determine adequacy with respect to QR 19.0 requirements.
- C) Review completed software testing documentation.
- D) Interviewing individuals responsible for development of software plans and documentation, programmers performing code modifications, and individuals which performed software testing.

References:

10CFR830.120, Quality Assurance
WHC-SP-1131, WHC Quality Assurance Program and Implementation Plan

Personnel Interviewed:

Nuclear Process Operator
NDE System Engineer
NDA System Engineer
Computer Programmers (2)
Lead Computer Engineer

Evolutions/Operations/Shift Performance Observed:

Troubleshooting efforts related to an observed problem with the NDA processing of a test barrel.

DISCUSSION OF RESULTS

Records:

WHC-IP-1237, Plant Management System (PMS) Configuration Management Plan.
HNF-W026-009, Specification for WRAP1 Plant Management System Software
PRCR Log (latest version)
WRAP1 PMS Software Requirements Matrix
DMS-FD1, Rev. 2, DMS Comm. Functional Test

Interviews:

Individuals interviewed appeared knowledgeable with respect to their Software Quality Assurance related requirements and responsibilities. No problems were noted. The Nuclear Process Operator indicated that he had never written a software Problem Report.

Review Conclusion:

Sufficient numbers of qualified programmers appear to be provided, and adequate facilities and equipment appear to be available to ensure computer software development, testing, and configuration control is adequate to support operations. The processes and documentation reviewed appear to be appropriate and adequate to meet applicable requirements.

Issue(s):

None

Inspected by: Michael C.
Humphreys

Approved by:

H. Daniel
ORR Team Leader

Date: 3/6/97

RA APPRAISAL FORM

CAR No: CR-8 G (Hoisting and Rigging)	Criteria Met: Yes
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Requirement: Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure the hoisting and rigging program is adequate for operations;

Criteria:

1. Management has an established Hoisting and Rigging Program.
2. Sufficient numbers of qualified Hoisting and Rigging personnel are available.
3. Adequate facilities and equipment are available to support Hoisting and Rigging operations.

Approach:

1. Review the WRAP ORR to ensure adequacy of their ORR as it pertains to hoisting and rigging.
2. Review records to ensure that all personnel involved in hoisting and rigging operations are qualified to perform their assigned tasks and that their training is up to date.
3. Verify that a preventative maintenance program has been established and verify that all preventative maintenance for the applicable hoisting rigging equipment is up to date.
4. Interview management, supervision, and crafts involved in hoisting and rigging operations to ensure that they clearly understand their roles and responsibilities.
5. Monitor a hoisting and rigging operation.

References:

DOE-RL-92-36, Hanford Site Hoisting and Rigging Manual.

Records Reviewed:

1. Training records for 3 Nuclear Process Operator (NPO's)
2. Maintenance for Jib Cranes
3. Preventative Maintenance Procedure for Jib Cranes
4. Equipment OJT Evaluation Status Sheet for facility NPO's
5. WRAP-1 ORR corrective action status book
6. WRAP-1 ORR

Personnel Interviewed:

1. Operations and Maintenance Manager

2. Operations Team Leaders (2) (Duty Operations Supervisors)
3. Lead Maintenance Manager
4. Maintenance Engineer
5. Work Control Team Leader
6. Planner/Scheduler
7. NPO's (2) (Forklift and jib crane operators)
8. Forklift Truck Custodian

Evolutions/Operations/Shift Performance Observed:

Cold Run involving shipping and receiving of one pallet of simulated waste drums. Followed event from receiving of the drums through to X-ray. Dayshift.

DISCUSSION OF RESULTS

Records: A review of the records indicated that on paper a program has been established, adequate facilities/equipment is available, and sufficient numbers of qualified personnel are provided. There was one finding and two observations in this area.

There is no formal OJT/OJE program pertaining to the qualification or verification of qualification of personnel performing as qualified inspectors as described in Chapter 4 of the above referenced manual, finding CRg-003.

The recall system does not track forklift truck periodic inspections/maintenance, observation CRg-002.

The Duty Operations Supervisor qualification does not include any familiarization training on fork lift truck operations, observation CRg-003.

Interviews:

The personnel interviewed were extremely cooperative, helpful, and supplied all the documentation requested.

Based on the interviews conducted there is a sufficient number of qualified personnel and in most part they understand their part of the hoisting and rigging program.

There are two observations in the area of qualifications (CRg-1 and 3). The first one deals with the Forklift Custodian not understanding his roles and responsibilities. The second concerns the Duty Operations Supervisor qualification program not having any type of familiarization training in the area of forklift truck operations.

Observations: Based on my observation during the cold run performed on Tuesday morning, the 4th of March, the operators exhibited adequate knowledge of the operations in progress. I had very few comments in this area. Two findings resulted as part of my walk thru during this cold run.

In general operations observed were performed in a safe and professional manner. The forklift truck operators were observed performing the required pre-use inspection.

Only one instance of potentially unsafe operation was observed and that was during the transfer of barrels from the receiving port to the ASA system. When lifting the facility metal pallet off the ground the fork lift mast was tilted slightly forward contrary to the recommended safe operation actions described in Chapter 6 of the referenced document. The manual states that load should be lifted with the mast vertical or tipped slightly backwards.

The only commands or orders given in regards to transferring the barrels from the wooden pallet to the facility pallet was by hand. It was not noisy enough that day to justify a non-verbal signal.

During this evolution I noted two deficiencies regarding forklift trucks. The rated capacity was not clearly marked on the trucks, finding CRg-002. The pre-use check list attached to the electric forklift trucks was for a engine powered truck, finding Crg-001.

Review Conclusion: Based on the above in the area of hoisting and rigging management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available. The findings generated are all post start. The observations if acted upon will enhance the overall performance ensuring continued safe operations at WRAP.

Issue(s):

CRg-001, Two facility electric fork lift trucks do not have the correct pre-use check list attached. (This item has been corrected)

CRg-002, Two facility electric trucks do not have their rated capacity clearly marked on the forklift.

CRg-003, There is no formal program established for the qualification or verification of qualification of personnel performing in the capacity of "qualified" inspectors in the area of crane and rigging equipment periodic inspection.

The facility maintenance manager reported that action is being taken in regard to this finding.

Inspected by: Dennis C Humphreys	Approved by: <u><i>L. D. Davis</i></u> ORR Team Leader Date: <u>3/6/97</u>
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RA APPRAISAL FORM

CRA No: CR-8 H (Permitting)	Criteria Met: Yes <u> x </u> NO <u> </u>
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Requirement:

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services, training, maintenance, radiological protection and health physics, emergency preparedness, fire protection, engineering, and computer software, are adequate for operations;

Criteria:

- a. The organizational structure is clearly defined, and staffing and resources are adequate to accomplish assigned tasks. Responsibilities, authority, and interfaces for each organizational position are clearly defined and understood to support the WRAP I operations.
 - Personnel assigned to monitor permits have adequate skills to assess and implement permits. Management understands permits and supports personnel responsible for them.
 - Permits are in place which allow WRAP I to operate in compliance with applicable regulations.

Approach:

- a. The WRAP I process requires remote handling of drummed materials. The permit should comply with all Federal, State and other applicable regulations.
 - Review requirements for storing, transporting, collecting, and handling of drums. Assess procedures against requirements to determine if they are adequate.
 - Perform test run to ensure process meets permit requirements.

References:

Form 3. Dangerous Waste Permit Application, Part A.
U.S. Environmental Protection Agency/State Identification Number
WA7890008967.

DOE Order 1540.2, Hazardous Material Packaging for Transport-Administrative Procedures, December 19, 1986.

DOE Order 5480.3, Safety Requirements for the Packaging and Transportation of Hazardous Materials, Hazardous Substances, and Hazardous Wastes, July 7, 1985.

Records Reviewed:

Part A Permit - WAC-173-303-805

Air Permit - DOH 116.1, WDOE 116.2, EPA 116.3

Site wide discharge permit - WAC 173-216

Storm water Permit -WAC-173-216

Recycling logs - 40CFR 262.41(6), Hanford Facility RCRA Permit II.F

Hazardous Materials Log Sheets - 203.1 EPCRA 312

Hazardous Waste Log Sheets

Unit Managers Meetings Minutes

Regulatory File Checklist

Personnel Interviewed:

Environmental Compliance Engineer

Environmental Compliance Officer

Evolution's/Operations/Shift Performance Observed:

Operation of the processing line. Hazardous waste and recycled accumulation storage area. Control room. Permit file cabinet.

DISCUSSION OF RESULTS

The operation of the facility should meet the requirements for the Part A permit. The facility will not have their Part B permit until July, 1998. This will allow time during initial start up to determine operating parameters which will be useful for negotiating the final Part B permit. Filters are installed to meet the Air Permit requirements. The storm water and miscellaneous streams are covered under the site wide permit. Recycling log sheets, hazardous materials and hazardous waste log sheets have been in use prior to start up to account for prestart waste. Battery and florescent tube recycling programs are in place.

There were some difficulties during the operation with the automation of the facility line. The automated transporter, "Christine" needed some debugging. A drum got hung up on the rollers of the conveyor system and took a few minutes before it released. The clocks on the control room monitors for the non-destruct units are not set to the correct time.

Records:

Record keeping is outstanding. Files are simple and easy to look through. All permits are kept in a central file. Log books are orderly. Reviewed the following:

Waste Minimization log books
Hazardous Material log book
Hazardous waste log book
Regulatory File Checklist
Permit/regulatory file

Interviews:

Environmental Compliance Engineer
Environmental Compliance Officer

Observations:

The WRAP I facility is proactive. They site Environmental personnel are presently communicating with the 222-S facility, a operational facility that has been recently audited by the WDOE. The WRAP I facility is utilizing the findings at the 222-S facility as a means of self auditing. Waste Minimization program is outstanding. It has been nominated for the Model Facility Award. This facility will have minimal hazardous waste generated. They evaluate materials for their hazards prior to implementing them into the facility and utilize substitution principles. They are presently working on rad/mixed waste streams to keep them to a minimum. Very organized.

Review Conclusion:

The permits for the WRAP I facility meet the requirements for operations. The Part B permit is not due until July of 1998. The Part A permit is expected to be signed off by March 7, 1997. The air permit exceeds the expected emissions. The miscellaneous streams are covered under the site wide discharge permit. The storm water is also covered under the site wide permit. The NOC's for the facility are also kept on file.

The excellent Waste Min program will reduce costs associated with waste disposal and paperwork for tracking of waste and allow credit for reductions. Many of the programs implemented in this facility should be evaluated for site wide implementation. The self assessment program is valuable. Taking lessons learned from other facilities and applying them to this facility will be quite beneficial.

Issue(s):

None.

Inspected by: M.L. Green

Approved by: *H. Daniel*
ORR Team Leader

Date: 3/5/97

RA APPRAISAL FORM

CR No: CR-9	Criteria Met: Yes
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Requirement:

A routine and emergency operations drill program, including program has been established and implemented.

Criteria:

Emergency and off normal operating procedures effectively guide the operations staff in responding to single and multiple events. Alarm-response, off normal, and emergency operating procedures are adequately linked and consider the Emergency Plan.

Emergency drills and exercises are conducted prior to WRAP - 1 operation. A full-scale exercise is conducted at least annually thereafter to test and verify the adequacy of the emergency plan.

Approach:

Review the WRAP - 1 ORR in this area for compliance with the above criteria.

Review evidence that drills/exercises are adequately planned, controlled, and critiqued; and that they demonstrate the ability to carry out key response functions in support of a WRAP-1 emergency. Observe drills during the RA.

Evaluate the procedures process (operations and administrative) to verify that off normal events defined in procedures are adequately linked to the emergency plan.

Through discussions with at least three operations personnel, confirm operator knowledge of emergency/off normal operating procedures.

References: DOE Order 5480.20A

Records Reviewed:

WHC-CM-5-34. Section 1.5, Solid Waste Disposal Administration, Emergency/Operational Drill Program; Operational Drill Scenario - Drill Title: Drum falls over in the NDE/NDA area and bursts open; FY97 WRAP 1 Emergency/Operational Drill Schedule

Personnel Interviewed:

Operations Manager, Drill Coordinator, Radiological Control Technicians, Operations personnel, controllers

Evolutions/Operations/Shift Performance Observed:

Performance of Operational Drill Scenario - Drill Title: Drum falls over in the NDE/NDA area and bursts open.

DISCUSSION OF RESULTS

Records:

Records were adequate to determine that a routine and emergency operations drill program, including program has been established and implemented.

Interviews:

The personnel interviewed were extremely cooperative, helpful and supplied all the documentation requested.

Observations:

Observed the performance of the facility drill to evaluate the effectiveness of the Drill Program.

Review Conclusion:

Based on documents reviewed, interviews, observations, the routine and emergency operations drill program, including program has been established and implemented to effectively support startup of WRAP-1 phase 1. During the performance of the drill the following observations were made:

No initial training is provided for drill team members. This training should include such subjects as drillsmanship.

There is no communications or coordination with the training department regarding drill development and scheduling.

The role of the drill program with regards to continuing training is not adequately defined.

Alarms and communications systems are not adequate to facilitate keeping the personnel in the administration and maintenance buildings informed of conditions. This was addressed in the previous ORR and is in the process of being corrected.

Conduct of the post drill critique was not clearly defined. As examples of this is that no one was taking notes to capture information as it came up.

The drill scenario was not realistic. Assuming that contamination on personnel would not be a problem when a spill was substantial enough to set off a CAM alarm 50 feet away sends the wrong message to facility personnel.

The initiation of the drill was poorly simulated. There was no one in the shipping and receiving area when the drill was initiated and it took awhile for anyone to notice the spill. The simulated spill should have been staged either in the NDE/NDA area or during barrel handling operations in the shipping and receiving area.

There are no drills that assess ability of operations to calculate inventory to be certain of remaining within 80% of the ASA which allows WRAP 1 to maintain its classification as a radiological facility.

Issue(s):

None

Inspected by: Colleen Meyers

Approved by:

HD Daniels
ORR Team Leader

Date: 3/6/97

RA APPRAISAL FORM

CRA No: CR-11	Criteria Met: Yes
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Requirement:

Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management responsible for control of safety, and the technical and management qualifications of contractor personnel, responsible for facility operations, are adequate.

Criteria:

- A) Verify organization chart (or equivalent) is available to delineate chain-of-command.
- B) Verify project staff understands organization.
- C) Verify project staff technical qualification requirements are established, current, and are being maintained.

References:

DOE Order 425.1, 9-25-95, Startup and Restart of Nuclear Facilities

Approach:

Review Organization Chart
Interview of Key Managers
Review of Training Records
Review of Job Descriptions
Review and Checking of Resumes to Job Descriptions

Records Reviewed:

Training Records for Plant Manager and Direct Reports
Job Descriptions
Resumes

Personnel Interviewed:

Vice-President Operations
Plant Manager
Operations/Maintenance Manager
Engineering Manager

Duty Operations Supervisor

DISCUSSION OF RESULTS

Records:

Records were adequate to determine the qualifications of staff, principal responsibilities, and organizational relationships. Although, they were not kept in a matrix or table format which, in the future, could lead to problems in the maintaining of adequate knowledge by the staff as to their responsibilities.

Interviews:

The personnel interviewed were extremely cooperative, helpful, and supplied all the documentation requested.

Review Conclusion:

The functions, assignments, responsibilities, and reporting relationships were defined, understood, and implemented with line management responsible for control of safety. The contractor personnel managerial and technical qualifications were adequate for facility operations.

Inspected by: <u>LD Daniels</u>	Approved by: <u>LD Daniels</u> ORR Team Leader
	Date: <u>3/4/97</u>

RA APPRAISAL FORM

CRA No: CR-12	Criteria Met: No
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Requirement:

The implementation status for DOE 5480.19, CONDUCT OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES, is adequate for operations.

Criteria:

Program requirements have been developed and issued for the topics addressed in DOE Order 5480.19

Operations personnel demonstrate the principles of the Conduct of Operations requirements during shift performance. Adequate performance will be demonstrated in all areas of the order, including:

- Shift Routines and Operating Practices (control area activity, logkeeping, shift turnover, communications)
- System control (lock and tag, independent verification, control of equipment, control of plant systems via status boards, system labeling, and as built drawings)
- Procedures and Training (control of on-shift training, procedure use, operator aids, required reading, timely orders to operators), Notifications (notification procedures, responsibilities, documentation methods)
- Housekeeping

Conduct of Operations program is in accordance with 5480.19 as implemented by the matrix of applicability, or, adequate compensatory measures are specified in the non-conformance plan.

Approach:

Reviews:

Review the WRAP-1 ORR in this area for compliance with the above criteria, Conduct of Operations Assessments, Review Management Self Assessments

Record reviews;

- Daily logs
- Shift turnovers
- Lock and Tag log
- As Built Drawings
- Matrix of Applicability

Interviews:

Assess the understanding of Conduct of Operations principles
Operators
Supervisors

Evolutions/Operations:

Assess the implementation of Conduct of Operations requirements
Drills and evolutions
Response to alarms
Shift turnovers
Pre-job briefs
Operator Rounds
Procedure Use
Lock and Tag
Communications

References:

DOE Order 5480.19

Records Reviewed:

WRAP-1 ORR Phase 1 Final Report
WRAP-1 Corrective Action Plan
Conduct of Operations Applicability Matrix
WHC-CM-5-34 Solid Waste Disposal Operations Administration
HNF-CM-5-36, SWD Internal Requirements, Chapter 1-5, Standard
Operating Practices, Section 7.1, Reporting Occurrences and
Processing Operations Information
WHC-IP-1237 WRAP Facility Administration Manual
Lock and Tag log
Out of Service Log
As-Built Drawings (14)

Personnel Interviewed:

Plant Manager
Operations/Maintenance Manager
Startup Manager
Radcon Manager
Engineering Manager
Team Leader (2)
Maintenance Supervisor
Operators (3)
Maintenance Technicians (3)
Health Physics Technician
Operators in Training (2)

Evolutions/Operations/Shift Performance Observed:

Receipt/Storage/NDE/NDA of Drums
Drill (CAM Alarm with Radioactive Spill)
Electrical Lock and Tag

DISCUSSION OF RESULTS

Records:

Reviewed the following procedures to determine their adequacy to support facility operations:
Shift Routines and Operating Practices
WRAP-1 Control Area Practices
Communications
On-The-Job Training
Control of Equipment and System Status
Lock and Tag
Independent Verification
Alarm Management
Logkeeping
Operations Turnover
Require Reading
Timely Orders to Operators
Operator Aid Postings
Equipment and Piping Labeling
Occurrence Reporting and Notification

Interviews:

Interviewed the Operations Manager to determine his expectations for the implementation of Conduct of Operations in the WRAP-1 Facility and to determine knowledgeable. Interviewed the Startup Manager to determine the adequacy
Team Leader (2)
Operators (3)
Maintenance Technicians (3)
Maintenance Supervisor
Operators in Training (2)
The personnel interviewed were adequately knowledgeable of the occurrence reporting process and requirements for notification.

Observations:

Receipt/Storage/NDE/NDA of Drums
Drill (CAM Alarm with Radioactive Spill)
Electrical Lock and Tag

Review Conclusion:Assessment of normal operations:Receipt/Storage/NDE/NDA of Drums:

Relative to conduct of operations, a plant performed activity was observed from the control room area, shipping and receiving area, and the NDE/NDA area. This operation included the receipt, storage, weighing, and NDE/NDA of four 55 gallon drums. The operation was graded as satisfactory. Observations of these activities indicated an excellent awareness of the procedural and safety requirements on the part of the operators. The following observations were made:

- * plant procedure WRP1-OP-0502 needs to provide clarification regarding the methodology and responsibility for verifying that the fissile material quantity of each received container is less than 200 g for drums.
- * the plant needs to rectify the software deficiency in determining the weight of drums (kg/pound conversion issue).
- * some communications were informal, i.e. repeat backs, use of acronyms, use of hand signals, and stating calling and receiving identifiers.
- * barrels on the wooden pallet were not lashed.
- * forklift operator lifted a load with the mast tipped forward.

Electrical Lock and Tag:

A Lock and Tag was performed on a piece of equipment (air dryer). Observations of these activities indicated an excellent awareness of safety requirements on the part of the Lock and Tag custodian, cog engineers, operators, maintenance technicians, and maintenance supervisor. The following observations were made:

- * the verifier did not verify the adequacy of the boundary.
- * the Lock and Tag custodian and maintenance supervisor initialed the block for safe energy check performed by after observing the safe energy check.
- * the Lock and Tag custodian demonstrated excellent knowledge of the lock and tag program and use and verification of current drawings.

Assessment of Pre-job and Daily Briefs:

The conduct of pre-job briefs and daily brief was reviewed and the following observations are made:

- * maintenance and operations have the daily brief at the same time and in the same location causing high noise levels and distractions

Assessment of Drill (CAM Alarm with Radioactive Spill):

Relative to the conduct of operations, a facility performed casualty was observed from the control room area, shipping and receiving area, and the NDE/NDA area. This drill exercised the operators and rad techs during an upset condition. The drill was graded as satisfactory. The following observations were made:

- * some communications were informal, i.e. repeat backs, use of acronyms, and stating calling and receiving identifiers
- * PA announcement of the spill was late
- * very little information was announced to the facility during the drill
- * Building Emergency Procedures were not used in the control room area during the drill

Review of the Lock and Tag procedure identified that it requires the Verifier to verify that boundaries provide full isolation. The tag Verifier does not verify that the tag provides full isolation.

Review of the Oct of Service logbook identified that there are alarms that are out of service and are not logged in the Out of Service Log or in the Control Room Log. Additionally, the Out of Service log has not been audited.

Occurrence Reporting and Notification programs are adequate and implemented adequately to support facility operations, though the current Training Plan does not include training in event critiques.

A non-exhaustive review of labeling identified that several pieces of equipment and facility components do not meet the labeling requirements as established in WHC-CM-5-34.

Review of procedures identified that all alarms associated with the WRAP-1 control room annunciator panel do not have corresponding alarm response procedures as required.

A review of the facility identified at least one operator aid was posted in the control room on panel 201-CNS-12-102 without authorization.

Reviews were conducted of plant documentation associated with Shift Routines and Operating Practices, WRAP-1 Control Area Practices, Communications, On-The-Job Training, Control of Equipment and System Status, Lock and Tag, Independent Verification, Alarm Management, Logkeeping, Operations Turnover Standing Orders, Required Reading, and Operator Aids.

Additionally, plant inspections were performed to determine the degree of compliance to the requirements for plant labeling and operator aids. Interviews were conducted with management, field supervisors, support organizations, and operations personnel. Based on document reviews, interviews, and observations the review of the Conduct of Operations program does not meet the criteria due to the weaknesses in control of the Out of Service equipment, labeling, communications, alarm response procedures, and operator aids.

Issues:

12-001: Verifier does not verify that the boundaries provide full isolation as required by procedure.

12-002: Alarms that are out of service are not logged in the Out of Service Log or in the Control Room Log.

12-003: Out of Service log has not been audited.

12-004: Training Plan does not include training in event critiques.

12-005: Several pieces of equipment and facility components do not meet the labeling requirements as established in WHC-CM-5-34.

12-006: All alarms associated with the WRAP-1 control room annunciator panel do not have corresponding alarm response procedures as required.

12-007: At least one operator aid was posted in the control room on panel 201-CNS-12-102 without authorization.

Inspected by: James J. Allen,
Steve Veitenheimer,
Larry Earley

Approved by:

ORR Team Leader

Date: 3/6/97

RA APPRAISAL FORM

CRA No: CR-13	Criteria Met: Yes
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Requirement:

There are sufficient numbers of qualified personnel to support safe operations.

Criteria:

Minimum staffing requirements have been established for operations personnel, supervisors, shift technical advisors, and managers. These staffing levels are met and are consistent with the safety analysis report requirements and assumptions.

Sufficient numbers of qualified operations personnel, supervisors, shift technical advisors, and managers are available to carry out facility operations.

Approach:

Review:

Review the WRAP-1 ORR in this area for compliance with the above criteria

Record Review:

Review staffing requirements. Compare them with personnel records to assess the ability of the facility to field the required personnel

Interviews:

Interview technical and management personnel to confirm they are qualified to operate the facility and understand the minimum staffing requirements for all phases of facility operations.

Evolutions/Observations:

Assess technical and management qualifications during drill and routine evolutions. Assess staffing levels while observing drills and routine evolution to determine if they are adequate and satisfy administrative and safety basis requirements.

References:

DOE Order 5480.20A

Records Reviewed:

WRAP-1 ORR Phase 1 Final Report
 Training Records (6)
 Corrective Action Plan for Finding 13.1.1

Personnel Interviewed:

Operations Manager
 Operations Training Instructor
 Team Leader (2)
 Operators (3)
 Maintenance Technicians (3)
 Operators in Training (2)

Evolutions/Operations/Shift Performance Observed:

Receipt/Storage/NDE/NDA of Drums
 Drill (CAM Alarm with Radioactive Spill)

DISCUSSION OF RESULTS

Records:

Reviewed the WRAP-1 ORR Phase 1 Final Report to determine the adequacy of the review. Reviewed the training records of managers/supervisors and operators to determine if they adequately fielded the required personnel. Reviewed the Corrective Action Plan to determine the adequacy of the actions taken to correct finding 13.1.1.

Interviews:

Interviewed the operators, maintenance technicians, supervisors, and management to confirm they are qualified to operate the facility and understand the minimum staffing requirements for all phases of facility operations.

Observations:

Observed the performance of the Receipt, Storage, NDE, and NDA of Drums and the performance of a drill (CAM Alarm with Radioactive Spill) to assess the technical and management qualifications during drill and routine evolutions and to assess staffing levels to determine if they are adequate and satisfy administrative and safety basis requirements.

Review Conclusion:

Based on record reviews, interviews and observations the minimum staffing requirements have been established for operations personnel, supervisors, shift technical advisors, and managers. These staffing levels are met. Sufficient numbers of qualified operations personnel, supervisors, shift technical advisors, and managers are available to carry out facility operations. The WRAP-1 ORR satisfactorily assessed this area.

Issue(s):

None

Inspected by: James J. Allen

Approved by:

ORR Team Leader

Date: 3/6/97

RA APPRAISAL FORM

CRA No: CR-17	Criteria Met: No
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Requirement:

The results of the responsible contractor Operational Readiness Review are adequate to verify the readiness of hardware, personnel, and management programs for operations.

Criteria:

The scope of the WRAP-1 readiness determination is adequate for assessing the areas of health, safety, and the environment, and verifies the satisfactory implementation of all appropriate program and practices necessary for safe operations.

Approach:

Review:

Assessment of the adequacy of the scope of the WRAP-1 ORR is performed for the Objective for the Focus Areas. Evaluation under this objective is an integrating activity that will evaluate the cumulative results of assessing adequacy of the WRAP-1 ORR scope and depth to make a determination of overall adequacy.

To assess the adequacy of the ORR results, the Team will review the WRAP-1 Implementation Plan, findings, recommendations, implementation plans, and schedules to ensure they are adequate in detail. Verify the rationale for corporate acceptance of any noncompliance item, including the process for determination of prestart-start and post-start items. Determine whether the contractor has systematically analyzed findings for root causes and generic implication. Evaluate the effectiveness of the contractor's findings closure system.

References:

DOE Order 425.1

Records Reviewed:

WRAP-1 ORR Phase 1 Final Report
WRAP-1 ORR Corrective Action Plan

Personnel Interviewed:

None

Evolutions/Operations/Shift Performance Observed:

None

DISCUSSION OF RESULTS

Records:

Reviewed the WRAP-1 ORR Phase 1 Final Report to determine the adequacy of the WRAP-1 ORR scope and depth to make a determination of overall adequacy and to verify the rationale for corporate acceptance of any noncompliance item, including the process for determination of pre-start and post-start items. Reviewed the WRAP-1 ORR Corrective Action Plan to determine whether the contractor had systematically analyzed findings for root causes and generic implication and to evaluate the effectiveness of the contractor's findings closure system.

Review Conclusion:

The contractor ORR did not identify weakness in the following Core Requirements: CR-1, CR-2, CR-8, CR-12, . The facility's Corrective Action Plan did not adequately analyze for root causes and did not address all areas of each finding. Documentation of the corrective actions taken on WRAP-1 ORR finding 13.1.1 did not address all areas of the finding, the root cause did not address the problem, and the corrective actions are not correcting the findings.

Issue(s):

The following is a list of observations identifying the weakness in the ORR:

17-001 WRAP-1 ORR Phase 1 did not adequately assess Core Requirement 1 and Core Requirement 12

The following is a list of findings identifying weaknesses in the Corrective Action Plan:

17-001 Corrective actions taken did not correct the finding

Inspected by: James J. Allen	Approved by: ORR Team Leader Date: 3/6/97
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RA APPRAISAL FORM

CRA No: CR-20

Criteria Met: Yes

Requirement:

Operations Office Oversight Programs such as Occurrence Reporting, Facility Representative, Corrective Action, and Quality Assurance Programs are adequate.

Criteria:

RL Oversight Programs for Occurrence Reporting, Facility Representative, Corrective Action Management, and Quality Assurance should be in place to manage and/or monitor contractor activities.

Approach:

Verify that RL Oversight Programs for Occurrence Reporting, Facility Representative, Corrective Action Management duties and responsibilities and Quality Assurance are adequate and implemented for the scope of the review.

References:

DOE Order 425.1, Startup and Restart of Nuclear Facilities

Records Reviewed:

DOE Facility Representative Logbook

Personnel Interviewed:

DOE Facility Representative assigned to WRAP

Evolution's/Operations/Shift Performance Observed:

None

DISCUSSION OF RESULTS

Records:

The Facility Representative's Logbook was reviewed and found to be adequately maintained.

Interviews:

The DOE Facility Representative responsible for the WRAP Facility was interviewed and found to have adequate knowledge of his oversight responsibilities.

Observations:

None

Review Conclusion:

The Operations office oversight Programs such as Occurrence Reporting, Facility Representative, Corrective Action, and Quality Assurance Programs are adequate for facility operations.

Issue(s):

None

Inspected by: John D. Long	Approved by: <u><i>HA Daniels</i></u> ORR Team Leader Date: 3/5/97
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