Phase V Storage (Project W-112) Central Waste Complex Operational Readiness Review, Final Report

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Abstract: This document is the final report for the RFSH conducted, Contractor Operational Readiness Review (ORR) for the Central Waste Complex (CWC) Project W-112 and Interim Safety Basis implementation. As appendices, all findings, observations, lines of inquiry and the implementation plan are included.

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PHASE V STORAGE (PROJECT W-112)

CENTRAL WASTE COMPLEX

OPERATIONAL READINESS REVIEW, FINAL REPORT

MAY 22, 1997

**PREPARED BY
RUST FEDERAL SERVICES
OPERATIONAL READINESS REVIEW**

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SECTION I

SIGNATURE PAGE

CWC PHASE V STORAGE
OPERATIONAL READINESS REVIEW FINAL REPORT

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PERFORMED: May 9, 1997 TO May 15, 1997

ISSUED BY: RUST FEDERAL SERVICES OF HANFORD INC.

APPROVED BY:

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SECTION II

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Central Waste Complex Phase V Storage Operational Readiness Review (ORR) was performed per *WHC-CM-5-34, Solid Waste Disposal Operations Administration, Section 1.4, Operational Readiness Activities*, and *WHC-IP-1048, Operational Readiness Review Activities, Section 1, Performance of Operational Readiness Reviews*. A Plan of Action (POA), which specifies the requirements for startup, was developed by the facility and approved by DOE-RL. From the approved POA, the ORR Implementation Plan (ORRIP) was developed and approved by the review team. The ORRIP was used to define and control the process by which the Review Team (RT) conducted its review. The focus of the ORR was the three new storage buildings added to the CWC and the change in the safety basis that resulted from the addition of the new buildings. The RT was comprised of personnel wholly independent of the project.

The ORR consisted of documentation review, observing plant operations and drills, personnel interviews, and hand-over-hand inspections. Each RT member reviewed core requirements in which they had experience. The RT determined, through the finding classification criteria, the following findings as significant enough to warrant correction prior to authorization to commence operations:

Emergency Preparedness

Conduct of Drills

Complete implementation of the Interim Safety Basis

Other findings of lessor significance were deemed to be of such a nature as to allow correction after startup (poststart). It has been concluded by the RT that the facility is ready to commence operations at the completion of the above mentioned prestart items which are described in greater detail in appendix A of this report.

SECTION III

INTRODUCTION

PURPOSE

The purpose of this review was to ensure facilities, equipment, personnel, procedures, and management control systems are in place to operate Phase V Storage safely, efficiently, and in compliance with all applicable requirements. For the startup of a modified Hazard Class 2 Nuclear Facility (CWC), with a change to the safety basis, WHC-CM-5-34, Solid Waste Disposal Operations Administration, Section 1.4, Operational Readiness Activities required the performance of an ORR with Operations Office Manager as Approval Authority. The review type and Approval Authority are commensurate with the facility's potential impact on safety and its planned operations.

SCOPE

The ORR scope included all facilities, equipment, personnel, procedures, and management control systems needed to support or interface with Phase V Storage operations and maintenance. Interfacing operations, activities, and organizations were reviewed to the extent in which they affected Phase V Storage or Phase V Storage affected them. The ORR reviewed specific requirements to the breadth defined in HNF-SD-WM-PLN-124, *Plan of Action for Phase V Storage Operational Readiness Review* and to the depth defined in HNF-SD-WM-IP-011, *Implementation Plan for Phase V Storage Operational Readiness Review*. The review process and methodologies consisted of the following basic steps:

- ✓ Core requirements assigned to Review Team members
- ✓ Facility assessed by use of the criteria and review approaches presented in the IP (assessments consisted of documentation review, observing operations and drills, hand-over-hand inspections, and personnel interviews).
- ✓ Findings, observations, and assessment performance documented.
- ✓ Multiple similar findings combined.
- ✓ Findings were classified as either prestart or poststart.
- ✓ Findings and observations tracked to closure.

REVIEW TEAM

The review team was composed entirely of personnel independent of the project from the following disciplines: Engineering; Nuclear Safety; Industrial Safety; Quality Assurance; Conduct of Operations; Management; Maintenance; Emergency Preparedness; Health Physics; Environmental Compliance.

FACILITY DESCRIPTION

The Phase V Storage (Project W-112) was constructed to provide additional mixed solid waste storage space in the Central Waste Complex (CWC) to store containers prior to processing and/or treatment. The CWC is operated by RUST

Federal Services of Hanford Inc. (RFSH) Solid Waste Management Organization. The W-112 project included infrastructure work, a maintenance trailer Supporting the Waste Receiving and Processing Plant (WRAP), and a support trailer supporting WRAP, as well as the three Phase V Storage buildings. The WRAP trailers have been previously accepted, are in operation, and will not be included in the scope of the ORR for the Phase V Storage buildings. therefore, subsequent reference to Project W-112 will only be in relation to the three additional storage buildings 2404 series, to be incorporated into the CWC.

The Phase V Storage buildings are located in the CWC 200 West area and are bounded by Dayton Avenue, 23rd street, and 16th street. Phase V Storage consists of three long-term drum storage buildings that will provide 13,300 drum equivalent of radioactive and mixed solid waste storage space. Construction is similar to existing CWC structures. Contact-Handled (CH) wastes from onsite and offsite generators are to be stored. Waste will include low-level, mixed low-level, transuranic (TRU), suspect TRU, TRU-mixed, and remote-handled waste shielded down to CH packages. The storage area will be capable of receiving and accommodating 208-liter (55-gallon) and/or 322-liter (85-gallon) pelletized drums stacked up to three high, and other waste packages such as steel boxes.

The design utilized manual waste storage and waste package transport concepts (e.g., pelletized containers and forklift transport) to safely and compliantly store solid waste. The storage area will be accessible to appropriate drum and/or pallet moving equipment. The facility is equipped with a fire suppression system, 120 volt and 480 volt electrical system, telephone, sanitary/raw water system, freeze protection, new and/or upgraded access roads, sidewalks, fencing, fire alarm system, radio fire alarm reporter, exhaust ventilation, nonisokinetic record samplers, ventilation, fire detection interlocks, portable fire extinguishers, slopped epoxy coated floors, liquid collection curbing and/or catch basins, personnel doors, roll-up doors, lighting, and emergency lighting.

Incoming solid waste will be routed to the storage buildings for log-in. Drums will be categorized and routed to appropriate areas. When required, stored waste will be transferred from various storage locations to other storage areas, other Waste Management Operations facilities, to onsite disposal facilities (e.g., low-level burial ground, mixed low-level waste disposal, etc.) and to offsite commercial treatment facilities.

SECTION IV

ORR EVALUATION

ORR EVALUATION

This section of the report summarizes the ORR team activities and conclusions for each of the core requirements. Details related to each individual criterion and approach are in section VI, Appendix C, Lines of Inquiry. Those items considered to be findings are more fully identified in Section VI, Appendix A. Those items classified as observations are included in their entirety in section VI, Appendix B.

Core Requirement 1: "There are adequate and correct procedures and safety limits for operating the process systems and utility systems."

Facility operating and alarm response procedures were reviewed for incorporation of Interim Operational Safety Requirements. Procedure technical content is considered satisfactory for startup.

Operations personnel were interviewed and observed in the field during walkdowns to ensure an understanding of procedure use. Minor deficiencies were noted in this area as outlined in Observations/Finding. However, operations personnel knowledge and procedure use is considered satisfactory for startup.

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Core Requirement 2: "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.)"

Verification for this Core Requirement included reviewing training procedures, records, and lesson plans, reviewing training program content, interviewing training personnel, and reviewing progress toward achieving a needs and task based training curriculum complying with DOE Order 5480.20A.

Training records are complete, are maintained neat and orderly, and are easily retrievable. The training program requirements and policies are described in WHC-CM-5-34, Section 1.8. This procedure is complete and detailed. Although the final products, the training lesson plans and On the Job Training Performance meet the requirements, the historical development of the requirements analysis is lost in the mists of time. Work is underway to develop and document a new training curriculum which will meet the DOE Order 5480.20A requirements. This task is due to complete by the end of FY1997. Personnel interviews revealed that training instructors and training plan preparers are qualified and trained to perform their tasks. A lesson on the new ISB and the new storage buildings was presented to the ORR team and demonstrated satisfactory classroom performance. As noted in Core Requirement #3, the level of knowledge of personnel still needs to be improved prior to start up. Although the ISB training provided to the Solid Waste personnel did not include a knowledge examination, this Core Requirement is considered satisfactory for startup after completion of prestart finding 3.1.1

Core Requirement 3: "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."

No examinations were given for implementation of the Interim Operational Safety Requirements (IOSRs) derived from the Interim Safety Basis. Interviews were used to determine the level of knowledge of operations and operations support personnel. Level of knowledge of operations personnel is considered satisfactory for startup.

Interview results indicate level of knowledge deficiencies for the IOSR of operations support personnel in two areas. Specifically, operations support personnel interviewed were weak in their knowledge of the "Restricted" mode of facility operation and the specific administrative controls established by the IOSRs. (See Finding F.3.1.1). Level of knowledge of operations support personnel requires upgrade prior to startup.

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Core Requirement 4: "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."

The authorization basis document is in place and approved by both the subcontractor and the Department of Energy. Safety systems and controls applicable to protecting the worker, environment, and public are in place and actively applied throughout the facility from the Management tier down to the worker.

Interviews with plant personnel documented on the LOI form revealed a high degree of knowledge and responsibility relating to worker safety and the mechanisms and programs that functionally achieve that end product. All personnel interviewed, from the Manager down to the Nuclear Process Operator consistently replied with the same answers. This reveals a consistent attitude, training, and attention to safety throughout the organization.

The is an effective change control mechanism that follows the DOE directive for Nuclear facilities in managing change.

.....

Core Requirement 5: "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."

This requirement confirms the condition and operability of the safety systems. The buildings in question in the W-112 project are turn-key operations meaning the facility was constructed and tested (ATP) by the vendor. However, overview was maintained by KEH and WHC. The ATP and Operation and Maintenance documentation prepared by the vendor appears thorough. Documentation was verified by both KEH and WHC. A formal OTP was not performed but was built into the initial PM for the systems. This Core Requirement is satisfactory for startup.

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Core Requirement 6: "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."

This core requirement covered evaluation of the process to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor by a review of the Corrective Action Plan developed and implementation status resulting from the FEB assessment of December 1996, at CWC and T-Plant. The review found the Plan to be fully developed and all corrective actions being tracked to completion. Each corrective action has been entered in HATS. A formal root cause analysis has been made of the four core findings of the FEB. There were no open corrective actions that would preclude start-up of the Phase V Storage Buildings. The system for communications during emergency conditions was a FEB finding that is further evaluated elsewhere in this report as a post start activity.

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Core Requirement 7: "A systematic review of the facility's conformance to applicable DOE orders has been performed, any nonconformances have been identified, and schedules for gaining compliance have been justified in writing and formally approved."

Verification of this requirement consisted of reviewing the facility's conformance to applicable DOE Orders. The facility is operating to an approved S/RID, WHC-IP-1120 rev. 4. A Phase 1 and Phase 2 assessment were completed. A recent review by DOE-RL questioned the phase 1 assessment and required a correction action plan. A review by RFSH formulated a plan to replace the existing S/RID and perform a new phase 1 to demonstrated compliance with applicable DOE Orders. Plan and schedule were approved by DOE. This Core Requirement is satisfactory for startup.

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Core Requirement 8: "Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services (e.g., training, maintenance,

waste management, environmental protection, industrial safety and hygiene, radiological protection and health physics, emergency preparedness, fire protection, quality assurance, criticality safety, and engineering) are adequate for operations."

Note: This core requirement requires review of support services management programs, personnel, facilities, and equipment which were established and procured specifically for the facility. Due to the many areas to be reviewed, this core requirement was divided into 12 separate items and are presented as follows:

8.1: "There is an adequate emergency preparedness organization and program."

See summary for Core Requirement 9.
.....

8.2: "There is an adequate engineering support organization and program including the cognizant/system engineer approach."

Verification of this requirement looked into the adequacy of engineering support including cognizant/system engineer approach. The guidance documents as implemented utilize sufficient structure to ensure thorough cover of engineering principles in all areas of CWC including the new facilities in project W-112. Discussion outside of Engineering assure that sufficient engineering support was being provided in a timely fashion to support safe operation and maintenance within the CWC. This Core Requirement is satisfactory for startup.
.....

8.3: "There is an adequate environmental protection organization and program, to include air quality, surface water, groundwater, solid and hazardous waste, hazardous material handling, environmental monitoring, hazardous substance release reporting, and environmental protection quality assurance."

The review approach for CR 8.3 was to verify that an environmental protection program is in place, and being effectively implemented. A previous assessment by the Facility Evaluation Board reviewed the SWD environmental program to an even greater degree of detail during the period Dec 9-20, 1996. This ORR concentrated on looking for issues within the CWC Environmental Compliance organization, and the proposed changes due to bringing Phase V buildings to a "ready-to-receive-waste" state, which would demonstrate that a process of continuing improvement was being followed in implementing the existing environmental program.

A comprehensive screening of the Standards/Requirements Identification Document (S/RID, WHC-IP-1120) was made to determine compliance vs. best management practices in the existing Phase V/CWC environmental program. This screening resulted in many more approach items than were able to be verified during the limited schedule of the Phase V ORR.

Most of the S/RID items relating to operation of the Phase V buildings under the new ISB document were already covered as part of the continuing environmental program. A random number of items from the S/RIDs screening was pursued in greater detail, including participation in the emergency drill critique process.

From this detailed approach, one (1) finding (submitted as a Pre-start item) and several observations were developed. Of the observations, two relate to good practices and demonstrate the pro-active style of the CWC EC organization.

The overall impression is that the CWC environmental protection program is being adequately implemented, and meeting its basic requirements. The finding and observations are submitted with the intent of providing goals and suggestions for continued improvement, associated with operation of the Phase V buildings.

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8.4: "There is an adequate fire protection program."

All criteria of Core Requirement were reviewed for completeness by the facility, and found to be in generally good condition. Drawings were walked down and individuals were interviewed to determine readiness of the facility. The overall result was two findings; one having to do with the installation of the sprinkler system itself and the other was a tagging issue on the fire system valves. These findings are recorded under Core Requirement 15. After the facility has successfully dealt with these specific deficiencies, the elements of this Core Requirement will be considered satisfied to safely start up and operate the facility.

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8.5: "There is an adequate maintenance organization, program and work control system."

CONCLUSION:

While there remain some problems within the department, none were evident that would be of sufficient concern to affect the operational readiness to start this facility.

Maintenance requirements of the W-112 project are fulfilled by the existing Solid Waste Management Division maintenance organization. All facets of the maintenance program described in DOE 4330.4B are addressed in an approved Maintenance Implementation Plan (MIP) (WHC-SP-0851, May 5, 1995) which already encompasses the Central Waste Complex of which Project W-112 is a part. Maintenance of the building fire systems is the responsibility of the Fire Systems Maintenance organization of the Hanford Fire Department (HFD). There are no Technical Specification Requirements associated with any of the W-112 maintenance activities.

Because maintenance is addressed by an existing approved MIP and has recently been assessed by the Facility Evaluation Board (FEB) (December 1996) this Operational Readiness Review has been limited to determining the attitudes of the maintenance work force and their readiness to support operations of the new buildings, and overall progress towards meeting the findings of the FEB. To determine this information interviews were held with maintenance personnel (Paul Hemsworth, Dennis Rettkowski, Beth Wright, and several craftpersons) and supporting documentation was reviewed (the MIP, the FEB report, pertinent sections of CM-5-34 and CM-5-36, maintenance technical procedures).

1. Worker Attitude

Interviews indicated that the maintenance personnel, for the most part, have a good attitude toward their work. Workers felt they possessed the skills and had the support of management for tools, equipment, and training, when needed.

This reviewer was gratified to discover that most if not all maintenance personnel had received training and understood the relationship of their work to supporting the Authorization Basis (although one craftsman interviewed did not immediately recognize the term "ISB," did recognize "FSAR" and immediately made the connection). The organization is to be commended for this practice.

2. Progress against FEB findings

The FEB found four deficiencies:

- Lack of specific goals and performance metrics
- Failure to analyze and implement corrective actions for schedule or work-package non-performance
- Lack of resource-loaded schedules
- Failure to perform activities or commitments identified in the MIP

To address these findings, and to implement other improvements, Rust Federal Services of Hanford, Inc. (RFSH) has embarked on a major reorganization of their maintenance program. All RFSH maintenance planning/scheduling activities are to be centralized, as are most craft assets. Some craft assets will remain assigned to specific facilities within the RFSH organization, with the remainder being used to address major maintenance activities at whatever RFSH facility scheduled. While this reorganization is already under way, none of the immediate changes affect the performance of maintenance for Project W-112.

Participants in the reorganizational planning have indicated to this reviewer that, although some progress has already been made, all of the FEB findings will be fully addressed under the new organization.

To address the new organizational program, RFSH needs ensure a MIP is quickly written and approved, and the existing MIPs canceled.

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8.6: "There is an adequate quality assurance organization and program."

This core requirement covered evaluation of the adequacy of the quality assurance organization and program at the Central Waste Complex. Quality Assurance Program documentation, including WHC-CM-5-34) was reviewed for adequacy and was found to be adequate for continued operations and start-up of the Phase V Storage Buildings. Quality Assurance review and approval requirements are determined by the cognizant engineers who have review/approval designation authority for all support functions. Most of the work is routine and QA approval is seen more frequently on procedure development and upgrades. The SWITS software was formally verified and validated in accordance with the requirements of IEEE 830-1984. Changes are formally controlled and in accordance with the requirements of WHC-CM-4-2 Quality Assurance Program. A review of the SWITS V&V CHRONOLOGICAL LOG indicates that the essential requirements of WHC-CM-5-36 were satisfied. There were no pre or post start findings for this core requirement.

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8.7: "Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment."

The verification process for this core requirement involved program reviews and interviews with Solid Waste Management (SWM) personnel. The SWM Radiological Control (RadCon) program meets the requirements of 10 CFR 835, FDH Radiation Protection Program, and the Hanford Site Radiological Control Manual. Interviews with SWM employees and managers led to the conclusion that individuals understood radiological control is an integral part of their daily duties and that ALARA is everyone's responsibility. This Core Requirement is satisfactory for startup.

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8.8: "Industrial hygiene and safety programs, policies, and procedures have been developed which are consistent with the hazards present or anticipated in the working environment as well as with DOE orders and OSHA standards. The overall program is effectively managed to promptly address and remedy hazards, and systems are in place to communicate information to workers in order to prevent occupational injuries and illnesses."

Industrial Hygiene and Industrial Safety were reviewed in depth to satisfy this Core Requirement. Several walk downs of the 2404 series buildings were conducted with the operators and the safety representatives. The facility's HASP was also reviewed. The result of the review was a single finding having to do with the pre-occupancy hazard analysis documentation. After the resolution of this item the facility will have satisfied this core requirement

to safely start up and operate the new W2404 series buildings in accordance with requirements, including the ISB.

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8.9: "There is a security organization and program that adequately supports the requirements of the Phase V Storage area.

Per the DOE approved POA developed by the facility, this core requirement was not to be reviewed during the course of this review.

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8.10: "There exists an adequate configuration management program to assure necessary change and drawing control of plant structures, systems, and components and to assure changes are reflected in training, procedure development, maintenance instructions, and technical baseline."

HNF-CM-5-34, Section 2.4, Configuration Management; HNF-CM-5-34, Section 2.1, Configuration Change Control; and HNF-CM-5-34, Section 1.24, Unreviewed Safety Questions; adequately define an administrative program to ensure that future proposed changes remain compliant with the safety basis and that modifications are analyzed, documented, approved by appropriate personnel, and reflected properly in new/revised procedures, drawings, and training materials. The understanding of configuration control, as tested by interviewing seven (7) members of the Central Waste Complex organization, is adequate to ensure proper implementation of configuration control requirements. The evidence examined and documented by this review indicates that Core Requirement 8.10 has been met and Phase V Storage is ready to operate from a configuration management process perspective.

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8.11: "An adequate records management/document control program exists to assure that all important documents, records, and related information are maintained current and readily available."

This core requirement only evaluated Records Management as it pertained to startup and operation of the 2404 facilities. All organizations manage their documents adequately and provide the necessary controls for operation. There were no findings for this core requirement. The facility will be able to safely start up operations in this area.

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8.12: "There exists an occurrence reporting/root cause program."

This core requirement dealt with verifying that an occurrence reporting/root cause program exists with knowledgeable and independent (if applicable) personnel conducting investigations. The root/cause analysis for the four core FEB findings were reviewed and were found to be complete and pertinent to the issues raised. In addition the occurrence reports for Solid Waste Disposal were also reviewed. These showed there is a program in place. Interviews with both operations and support staff led to the conclusion that investigations are conducted by personnel independent from the event being investigated to the extent possible and that there is no hesitation at all in

seeking expertise from outside the organization when a benefit can be achieved by doing so. There were no pre or post start findings for this core requirement.

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Core Requirement 9: "A routine and emergency operations drill program, including program records, has been established and implemented."

A COMBINATION OF WALK AROUNDS AND DOCUMENTATION VERIFICATIONS WERE PERFORMED DURING THE REVIEW. OVERALL THE EMERGENCY PREPAREDNESS PROGRAM IS IN PLACE AND PERSONNEL CAN RESPOND TO EMERGENCY EVENTS. HOWEVER PERSONNEL NEED MORE TRAINING TO MEET THE RIGID REQUIREMENTS EXPECTED OF THE EMERGENCY ORGANIZATION BY THE FACILITY MANAGER AND SITE EMERGENCY PREPAREDNESS.

PERSONNEL WERE TRAINED AND DOCUMENTATION WAS IN PLACE FOR VERIFICATION AND THE BUILDING EMERGENCY PLAN WAS CURRENT AND IN PLACE. ADDITIONAL TRAINING AND DRILL PARTICIPATION WILL BE NEEDED IN THE FUTURE TO ENHANCE THEIR RESPONSE AND CONTROL OF EVENTS THAT COULD OCCUR.

IT SHOULD BE NOTED THAT SOLID WASTE MANAGEMENT HAS IMPROVED IN THE AREA OF EMERGENCY PREPAREDNESS IN THE LAST SIX MONTHS. IMPROVEMENTS TO THE BUILDING EMERGENCY PLAN, AND AN UPCOMING BUILDING EMERGENCY GUIDE ARE EXAMPLES OF IMPROVEMENT. OTHER EXAMPLES ARE PARTICIPATING IN A DRILL DURING THE ACCOUNTABILITY AIDE CLASS AND SIGNS DIRECTING PERSONNEL TO THE DESIGNATED STAGING AREA POSTED IN THE OUTLYING AREAS.

UPON SATISFACTORILY COMPLETING AN ADDITIONAL DRILL IN WHICH ORR MEMBERS OBSERVED AND DETERMINED THAT IMPROVEMENTS BY PERSONNEL PARTICIPATING IN THE DRILL AND PERSONNEL CONDUCTING THE DRILL HAVE SHOWN COMMAND AND CONTROL, GOOD RADIOLOGICAL CONTROL PRACTICES AND ADEQUATE DRILLMANSHIP, CORE REQUIREMENTS 8.1 AND 9.0 ARE CONSIDERED SATISFACTORY FOR STARTUP.

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Core Requirement 10: "An adequate startup or restart test program has been developed that includes adequate plans for graded operations testing to simultaneously confirm operability of equipment, the viability of procedures, and the training of operators."

Per the DOE approved POA prepared by the facility, this Core Requirement was not to be reviewed during this ORR.

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Core Requirement 11: "Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management responsible for control of safety."

The Solid Waste Management Operations organization chart clearly identifies the structure and reporting relationships within the organization. Operations and the support groups report to a single individual, the Manager, Solid Waste. The training record file for each person contains a position description describing that position's duties and responsibilities. Personnel interviews were conducted with various members of the organization. These interviews led to the conclusion that personnel understand their responsibilities, their impact on and responsibility for safety, information

flow within the organization, and personnel interactions within the organization. This Core Requirement is satisfactory for startup.

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Core Requirement 12: "The implementation status for DOE Order 5480.19, Conduct of Operations requirements for DOE facilities, is adequate for operations."

Verification for this Core Requirement included documentation and field observation reviews in the areas of Shift Routines and Operating Practices, Communication, Control of Equipment and System Status, Lockout and Tagout, Alarm Management, Logkeeping, Operations Turnover, Required Reading, Timely Orders to Operators, Operations Procedures, Operator Aid Posting, and Equipment and Piping Labeling.

The basic program elements are in place for all conduct of operations areas reviewed and are considered satisfactory for startup.

The controlling organization's lock and tag procedure does not designate how and where an authorized worker's lockout/tagout will be applied. (See Finding 12.1.1). This deficiency requires correction prior to startup.

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Core Requirement 13: "There are sufficient numbers of qualified personnel to support safe operations."

This core requirement was to verify there are sufficient numbers of qualified personnel to support safe operations and that the authorization basis minimum requirements are satisfied. The ISB requires only one qualified operator, one supervisor, and one rad. con. tech. for safe operations. Interviews with management indicated that there could be as few as one and, as many as six teams in the field at any given time depending on the volume of waste received. The eleven operators are each certified in three out of six possible areas and are backed up by operators from the burial grounds (12 ea.) who are cross trained and certified for CWC operations. There are ten rad. con. techs. that can be made available on an as needed, case by case, basis with full time coverage provided for high radiation exposure tasks. Operations is staffed by one manager, three leads, and three additional support staff members. The support organizations are also adequately staffed. There were no pre or post start findings for this core requirement.

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Core Requirement 15: "The facility systems and procedures as affected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.

This core requirement evaluated whether the W112 project 2404 facility has been correctly included into the CWC operating boundaries and that the associated Interim Safety Basis is being complied with. A thorough review of all project documentation was conducted including how that information was

utilized by the operating organization to assure long term operability. The Solid Waste Organization has done a commendable job in preparing the 2404 facilities for operation and preparing their staff for proper implementation of the ISB. The organization and facilities are ready for operation upon closeout of the pre-start findings.

.....
Core Requirement 19: "The technical and management qualifications of contractor personnel, responsible for facility operations, are adequate."

Verification for this Core Requirement consisted of reviewing position descriptions containing the duties and responsibilities for managers and Lead personnel and of interviewing several persons. The interviews led to the conclusion that Lead personnel and managers are technically qualified by education, training, and experience to perform their duties and that they understand their responsibility for safety and for environmental protection. This Core Requirement is satisfactory for startup.

.....
The approved Plan of Action eliminated the need for a contractor review of core requirements 14, 16, 17, 18, 20.

SECTION V

LESSONS LEARNED

LESSONS LEARNED

- 1) The review team needs to be in place well in advance of the review so they have plenty of time to not only complete required reading and training, but also they have enough time before the review begins to have all of the Lines of Inquiries completed before the review begins so the review time can be more effectively used for conducting interviews and completing facility walkdowns.
- 2) The facility needs to publish realistic schedules so the team can better plan their individual schedules to match up with the time allotted for the review.
- 3) Each team member should not be overloaded with too many Core Requirements if the review has a short time allotted. This review was only 5 days and some of the members had 3, 4 core requirements and found that the review was difficult to make as complete as was desired.
- 4) The Plan of Action and Implementation Plan need to be approved well in advance of the review so that the facility and the review team have ample time to plan the review and what gather documentation, perform self assessments, etc.

SECTION VI

APPENDICES

APPENDIX A

FINDINGS

PROJECT W-112/CWC ISB ORR MASTER FINDINGS LIST		
NO.	DESCRIPTION	PRE/POST
1.1	Emergency Procedures do not incorporate all required actions from the Building Emergency Plan (BEP), HNF-IP-0263-CWC; emergency procedures were not consulted by BED during drill.	PRE
3.1.1	Interviews of personnel who had been provided training on the Interim Safety Basis indicated general level of knowledge weaknesses in two specific areas: * 5 of 5 personnel interviewed could not explain the restricted mode of facility operation. * 5 of 5 personnel interviewed could not explain the administrative controls established in the IOSR's. All individuals were able to provide at least one administrative control.	PRE
8-1.1	Emergency Preparedness program is less than adequate.	PRE/POST
8-3.5.1	Hazards awareness at CWC and preparations for Phase V utilization do not give balanced attention to non-radioactive and radioactive sources in accordance with possible waste stream inputs which will enter 2404-WA, WB, WC.	PRE
8-8.1.1	A documented preliminary hazards assessment of the 2404 series storage buildings has not been completed for illumination requirements.	PRE
9.1.1	Drill program is less than adequate.	PRE/POST
12.1.1	DOE-RL-SOD-INST-L&T.001 Rev 1, Section 4.1 requires, in part, that the controlling organization's procedure specify how and where an authorized worker's lockout/tagout is applied. Section 2.9 (Lockout and tagout) of RFSH-200 (the controlling organization's procedure which replaced WHC-CM-5-34, Section 3.14) does not specify how and where an authorized worker's lockout/tagout is applied. Specifically, instructions are not included for how and where an authorized worker's lockout/tagout is applied by itself (without documentation).	PRE

15.2.1	The Central Waste Complex Interim Safety Basis(HNF-SD-WM-ISB-007 Rev.1) Administrative IOSR#6.2.2.1 which requires "lines of authority, responsibility, and communication are established and defined for the highest management levels through intermediate levels to, and including, all safety and operating organization positions". RUST correspondence RFSH-9656450, dated December 19,1996 did not provide sufficient information to determine how this IOSR was being complied with by the facility.	PRE
15.3.1	The Solid Waste Information and Tracking System (SWITS) is not being managed or implemented as a nuclear safety system.	POST
15.4.1	The Fire Suppression system sprinklers are not installed per manufacturers data nor meet the installation drawing H-2-823231; The components of the fire suppression system that are used for activation of the sprinklers do not have the proper labeling required per 5480.19; Minimum and maximum pressure ranges for supervisory air pressure and fire main water pressure specified in the CWC surveillance procedure are broader (less restrictive) than the ranges specified in the Fire Department procedure used for testing the 2404 series building fire suppression systems.	PRE

ORR FINDING FORM

FINDING NUMBER: F.1.1

CORE REQUIREMENT NUMBER: 1.0 CORE REQUIREMENT STATEMENT: There are adequate and correct procedures and safety limits for operating the process systems and utility systems.

CRITERIA NUMBER: 3 CRITERIA STATEMENT: Are technical details correct and consistent between operating procedures, drawings, system descriptions and training.

CRITERIA NUMBER: 8 CRITERIA STATEMENT: Are personnel complying with procedures

DATE: 5/14/97

FINDING STATEMENT:

- 1) Emergency Procedures do not incorporate all required actions from the Building Emergency Plan (BEP), HNF-IP-0263-CWC.
- 2) The Building Emergency Director did not consult any emergency procedure except for the Emergency Action Levels.

DISCUSSION/CONCLUSION:

- 1) Operating procedure SW-001-310 does not include steps all of the actions described in section 7.2.6 of HNF-IP-0263-CWC. The BEP requires the discoverer to notify the fire department which is not a step in SW-001-310. Several of the BED actions from the BEP are not included in SW-001-310.
- 2) During the observed drill, the BED did not utilize any procedures except the EALs which he reviewed for categorizing the event. HNF-IP-0263-CWC section 7.2.6 has specific steps for a Hazardous Material, Radioactive and/or Mixed Waste Spill. This resulted in the BED missing notification of the fire department of a mixed waste spill which was required by the procedure. The Hanford Fire Department must be notified of all hazardous spills. The BED also established the ICP at MO-288, but stationed himself at the scene until late in the drill which is contrary to HNF-IP-0263-CWC section 7.2.6. Procedure SW-001-310 was never reviewed for completion of actions and recovery.

RECOMMENDATION:

- 1) Revise procedure to match expectations.
- 2) Use procedures and revise them to match how you expect people to respond.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

R. D. Pickett

TEAM LEADER: C. G. Wolfe

ORR FINDING FORM

FINDING NUMBER: F.3.1.1

CORE REQUIREMENT NUMBER: 3 CORE REQUIREMENT STATEMENT: Level of knowledge of operations and operations support personnel is adequate based on reviews of examinations, examination results and selected interviews of operating and operations support personnel.

CRITERIA NUMBER: 1 CRITERIA STATEMENT: The level of Phase V Storage operations and direct support personnel's knowledge, skill and abilities are adequate to operate in compliance with the CWC operating and administrative procedures, as evidenced by selected interviews of personnel, review of examinations and examination results by the RT.

Note: For this review, interviews were directed at operations support personnel's knowledge of the requirements in the recently implemented Interim Operational Safety Requirements (IOSR).

DATE: 5/15/97

FINDING STATEMENT: Interviews of personnel who had been provided training on the Interim Safety Basis indicated general level of knowledge weaknesses in two specific areas:

- * Five of 5 personnel interviewed could not explain the Restricted Mode of facility operation.
- * Five of 5 personnel interviewed could not explain the administrative controls established in the IOSRs. All individuals were able to provide at least one administrative control.

DISCUSSION/CONCLUSION: The Interim Safety Basis and associated IOSRs were implemented and general training was provided to a large number of personnel utilizing the same lesson plan. No examinations were given to establish the level of knowledge retention for the training. The Central Waste Complex Readiness Team interviewed selected operations personnel, but did not interview operations support personnel.

Central Waste Complex management has not clearly established level of knowledge expectations for operations support personnel in the area of IOSRs nor has action been taken to determine the current level of knowledge.

RECOMMENDATION: Define level of knowledge expectations for the Interim Safety Basis and related IOSRs for operations support personnel. Provide training to designated personnel and test their knowledge with examinations or interviews.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

S. J. Turner

TEAM LEADER: C. J. Wolfe

ORR FINDING FORM

FINDING NUMBER: F.8-1.1

CORE REQUIREMENT NUMBER: 8.1 CORE REQUIREMENT STATEMENT: THERE IS AN ADEQUATE EMERGENCY PREPAREDNESS ORGANIZATION AND PROGRAM.

CRITERIA NUMBER: 4 CRITERIA STATEMENT: FACILITIES, EQUIPMENT, AND RESOURCES ARE IN PLACE AND ADEQUATE TO SUPPORT EMERGENCY RESPONSE OPERATIONS AND ENSURE THE PROTECTION OF ALL PERSONNEL (e.g. EMERGENCY OPERATIONS CENTER, BACKUP OR ALTERNATIVE FACILITIES, PRIMARY AND BACKUP COMMUNICATION, ALARMS ADEQUATE TO NOTIFY PERSONNEL, TRANSPORTATION, MEDICAL TREATMENT, RESPIRATORY EQUIPMENT, EXPOSURE CONTROLS, INSTRUMENTATION TO MEASURE EXPOSURE, ETC.

CRITERIA NUMBER: 6 CRITERIA STATEMENT: HAZARDS ASSESSMENTS ARE PREPARED, DOCUMENTED, AND MAINTAINED WHICH CONSIDERS EMERGENCY EVENTS THAT COULD AFFECT CWC.

CRITERIA NUMBER: 7 CRITERIA STATEMENT: INDIVIDUALS AND ALTERNATES ARE DESIGNATED TO PERFORM ALL EMERGENCY ROLES USING CLEAR LINES OF SUCCESSION.

DATE: 5/16/97

FINDING STATEMENT:

- 1) TWO-WAY RADIO SIGNALS ARE WEAK OR NONEXISTENT IN SOME AREAS OF THE STORAGE BUILDINGS. THIS DEFICIENCY DOES NOT ENSURE FULL COVERAGE OF THE FACILITY FOR NOTIFICATION OF PERSONNEL DURING EMERGENCY CONDITIONS. (POST-START)
- 2) FACILITY EMERGENCY EQUIPMENT INVENTORIES NEED UPGRADED AND LOCATIONS STATED IN THE BUILDING EMERGENCY PLAN ARE NOT SPECIFIC. (PRE-START)
- 3) THE SPILL KIT INSPECTED EAST OF 2404-WB CONTAINED OUTDATED SIGNS. (POST-START)
- 4) THE CURRENT SOLID WASTE/BURIAL GROUND HAZARDS ASSESSMENT DOES NOT REFLECT THE ISB. (POST-START)
- 5) RESPONSIBILITIES FOR EACH PERSON IN THE BUILDING EMERGENCY ORGANIZATION ARE NOT WELL DEFINED IN THE BUILDING EMERGENCY PLAN. MORE DETAIL IS NEEDED TO ESTABLISH DESIGNATED DUTIES FOR EACH POSITION OF THE ORGANIZATION. EXAMPLE: COMMUNICATOR AND RECORDER SHOULD BE SPECIFIED WITH DUTIES FOR EACH POSITION. (PRE-START)

DISCUSSION/CONCLUSION:

- 1) PERSONNEL RELY UPON TWO-WAY RADIOS FOR TIMELY COMMUNICATIONS WHILE WORKING IN THE STORAGE BUILDINGS. THE REDUCTION OF COMMUNICATION DURING EMERGENCY CONDITIONS PREVENTS TIMELY RESPONSE BY EMERGENCY PERSONNEL. MANY COMPLAINTS WERE STATED DURING THE EMERGENCY DRILL BY OPERATIONS MANAGEMENT AND NUCLEAR OPERATORS. FURTHER DISCUSSION ON COMMUNICATIONS MAY BE REFERENCED IN CORE REQUIREMENT 12.0. IT SHOULD ALSO BE NOTED THE FACILITY IS CURRENTLY PURSUING ANOTHER FREQUENCY FOR THE TWO-WAY RADIO SYSTEM THAT WOULD MINIMIZE OUTSIDE FACILITY INTERFERENCE.

2) THE PERSONNEL PROTECTIVE EQUIPMENT TABLE IN THE BUILDING EMERGENCY PLAN STATES IN SEVERAL AREAS THAT PERSONNEL PROTECTIVE EQUIPMENT IS LOCATED AT CWC. THIS IS A GENERAL STATEMENT AND DOES NOT DIRECT PERSONNEL TO SPECIFIC AREAS TO OBTAIN EQUIPMENT AND MATERIALS. OBSERVATIONS OF SEVERAL SPILL KITS FOUND THE FOLLOWING DEFICIENCIES: SPILL CONTROL KITS ARE LOCKED WITH WIRE TIES WHICH CANNOT BE BROKEN WITHOUT TOOLS, PERSONNEL SHOULD BE ABLE TO BREAK AND OPEN THEM BY HAND. NOT ALL SPILL KITS HAVE INVENTORY SHEETS IN CABINETS. RADIOLOGICAL POSTING SIGNS ARE OUTDATED.

3) HSRM ARTICLE 231.8 STATES THE ENTRANCE POINTS TO AREAS OF ONGOING WORK ACTIVITIES CONTROLLED FOR RADIOLOGICAL PURPOSES SHOULD STATE BASIC ENTRY REQUIREMENTS. IF A SPILL WAS TO OCCUR AT CWC, THE SIGNS IN THE SPILL KITS WOULD NOT STATE THE ENTRY REQUIREMENT (IE. RWP, RADIOLOGICAL WORKER TRAINING) FOR THE AREA, AND THUS VIOLATE HSRM REQUIREMENTS. HSRM ARTICLE 231.11 STATES THAT POSTING OF DOORS SHOULD BE SUCH THAT THE POSTINGS REMAIN VISIBLE WHEN DOORS ARE OPEN OR CLOSED.

4) THE CURRENT HAZARDS ASSESSMENT DOES NOT REFLECT ISB EVENT SCENARIO AND CONSEQUENCES. FOR EXAMPLE, THE MIXED WASTE DRUM FIRE BERYLLIUM CONCENTRATIONS ARE IN THE ISB BUT NOT IN THE CURRENT HAZARDS ASSESSMENT.

5) SPECIFIC REQUIREMENTS AND DUTIES ARE NOT DETAILED ENOUGH IN THE BUILDING EMERGENCY PLAN TO DEFINE AREAS OF RESPONSIBILITY FOR EMERGENCY ORGANIZATION MEMBERS. MORE DETAIL IS NEEDED TO ESTABLISH DESIGNATED DUTIES FOR EACH POSITION OF THE ORGANIZATION. EXAMPLE: COMMUNICATOR AND RECORDER SHOULD BE SPECIFIED WITH DUTIES FOR EACH POSITION.

RECOMMENDATION:

1) UPGRADE THE CURRENT PORTABLE RADIO SYSTEM TO INCREASE SIGNAL STRENGTH TO COVER ALL AREAS OF THE FACILITY OR DESIGN ANOTHER FORM OF TIMELY COMMUNICATIONS SYSTEM (i.e., PUBLIC ADDRESS SYSTEM ETC.)

2) UPGRADE EMERGENCY EQUIPMENT INVENTORIES, ESTABLISH SPILL KIT NEEDS BASED ON HAZARD INVENTORY, AND REVISE THE BUILDING EMERGENCY PLAN TO GIVE SPECIFIC LOCATIONS OF EQUIPMENT.

3) INSPECT ALL SPILL KITS TO ENSURE PROPER SUPPLIES ARE PRESENT AND REPLACE OUTDATED SIGNS.

4) REVISE THE CURRENT HAZARDS ASSESSMENT, EMERGENCY PLAN AND EMERGENCY ACTION LEVELS TO REFLECT ISB CONTENT AS APPROPRIATE.

5) REVISE THE BUILDING EMERGENCY PLAN TO REFLECT SPECIFIC RESPONSIBILITIES OF INDIVIDUAL EMERGENCY ORGANIZATION MEMBERS.

RESOLUTION:

SIGNATURES:

5/22/97

TEAM MEMBER:

R. E. ALLEN

TEAM LEADER: C. J. Wolfe

ORR FINDING FORM

FINDING NUMBER: F.8-3.5.1

CORE REQUIREMENT NUMBER: 8.3

CORE REQUIREMENT STATEMENT: There is an adequate Environmental Protection organization and program.

CRITERIA NUMBER: 5

CRITERIA STATEMENT: A program, with procedures and training, is in place to maintain hazardous material inventory controls, and to monitor and limit release of toxic chemical materials from Phase V to the environment. Verify implementation in other CWC facilities.

DATE: May 20, 1997

FINDING STATEMENT: Hazards awareness at CWC and preparations for Phase V utilization do not give balanced attention to non-radioactive and radioactive sources in accordance with the possible waste stream inputs which will enter 2404-WA, -WB, & -WC.

DISCUSSION/CONCLUSION: The facility has an excellent plan of the day, and pre-job safety briefing activities. However, safety compliance and environmental protection thought processes are concentrated on radioactive dose evaluation, and do not give sufficient attention to the specific needs of possible non-radioactive materials in the containerized wastes. Many of the radioactive wastes are co-mingled with organic and non-metallic materials which may be carcinogenic or poisonous if ingested/inhaled.

This finding is based primarily on observation of participants' reaction to critiques of the emergency drill held on May 14, 1997, from 9:00 to 10:00 AM. Responding support personnel (HPTs and IH) began surveying possible impacts from simulated spill in the building. Insufficient attention was made to use of suitable instrumentation to determine exposure to toxic chemical materials.

Drill scenario included information that container waste included nitric acid, tri-butyl phosphate and other organic solvents. No effort was made to search the facility records or the SWITS database to determine if reportable quantities were released, or if special health prevention measures would be needed for the affected operator(s). Immediate response personnel in the drill did not appear to be aware of these needs either, especially in the post-drill critique.

RECOMMENDATION: CWC management needs to evaluate the hazards communication segments of the current training program, to ensure that sufficient attention is provided for the operators to understand the possible dangers due to materials/wastes in received containers, including legacy wastes, and can identify unsafe or non-compliant situations and appropriate response actions for them.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

J. I. Gould
5-22-97

TEAM LEADER: C. J. Wolfe

ORR FINDING FORM

FINDING NUMBER: F.8-8.1

CORE REQUIREMENT NUMBER: 8.8 CORE REQUIREMENT STATEMENT: Industrial hygiene and safety programs, policies, and procedures have been developed which are consistent with the hazards present or anticipated in the working environment as well as with DOE Orders and OSHA standards. The overall program is effectively managed to promptly address and remedy hazards, and systems are in place to communicate information to workers in order to prevent occupational injuries and illnesses.

CRITERIA NUMBER: 5 CRITERIA STATEMENT: Sufficient work place surveillance exists to seek and track safety and health hazards. Regular and periodic audits are conducted to assess work place conditions.

CRITERIA NUMBER: 6 CRITERIA STATEMENT: Noncompliant conditions are documented, corrective action dates established, and tracking programs implemented to assure prompt abatement of observed hazards.

DATE: 05/15/97

FINDING STATEMENT: A documented preliminary hazards assessment of the 2404 series storage buildings has not been completed for illumination requirements.

DISCUSSION/CONCLUSION:

WHC-CM-5-36, Chapter 1-10, Section WKS 3, Paragraph 3.2 states, "Before each new occupancy or change of application for a facility or building, conduct a review to ensure that the facility is ready to safely accommodate the people and the intended use. Ensure that the following are among items addressed: Fire Protection; Lighting; Life Safety Code Compliance; Industrial Hygiene; Fire Department/Ambulance response; Traffic Safety." Paragraph 3.3 goes on to state the minimum information to be included in the report. Industrial Safety, Industrial Hygiene, and Fire Protection personnel have walked down the buildings and have identified many safety concerns which have already been corrected as punch list items. The process needs to be formalized and properly documented to determine "safe to operate condition" and to show compliance with the requirement.

RECOMMENDATION:

Perform and document an illumination survey for the 2404 series storage buildings prior to use.

RESOLUTION:

Survey of buildings complete and documented prior to close out of the ORR.

SIGNATURES:

TEAM MEMBER:

R. H. Night

5/21/97

TEAM LEADER: C. J. Wolfe

ORR FINDING FORM

FINDING NUMBER: F.9.1.1

CORE REQUIREMENT NUMBER: 9 CORE REQUIREMENT STATEMENT: A ROUTINE AND EMERGENCY OPERATIONS DRILL PROGRAM, INCLUDING PROGRAM RECORDS, HAS BEEN ESTABLISHED AND IMPLEMENTED.

CRITERIA NUMBER: 1 CRITERIA STATEMENT: THE DRILL PROGRAM ADEQUATELY PLANS, SCHEDULES, PREPARES, CONDUCTS, CRITIQUES, AND DOCUMENTS DRILLS.

DATE: 5/16/97

FINDING STATEMENT:

- 1) PERFORMANCE OF THE ORR EMERGENCY PREPAREDNESS DRILL WAS LESS THAN ADEQUATE IN THREE AREAS: DRILLMANSHIP, COMMAND AND CONTROL AND RADIOLOGICAL CONTROL. (PRE-START)
- 2) A PLAN NEEDS TO BE DEVELOPED FOR IMPROVING THE EMERGENCY PREPAREDNESS PROGRAM AT CWC. (POST-START)

DISCUSSION/CONCLUSION:

- 1) AN OPERATIONAL READINESS REVIEW EMERGENCY PREPAREDNESS DRILL WAS PERFORMED ON 5/14/97. THE OBSERVATIONS AND DEFICIENCIES NOTED INDICATED TO THE ORR TEAM THAT CWC PERSONNEL WERE NOT ADEQUATELY PREPARED TO DEAL WITH THIS EMERGENCY SITUATION. SEE ATTACHED INFORMATION.
- 2) AN OPERATIONAL READINESS REVIEW EMERGENCY PREPAREDNESS DRILL WAS PERFORMED ON 5/14/97. THE OBSERVATIONS AND DEFICIENCIES INDICATED TO THE ORR TEAM THAT CWC PERSONNEL WERE NOT ADEQUATELY PREPARED TO DEAL WITH EMERGENCY SITUATIONS. ACTIONS TAKEN BY THE EMERGENCY ORGANIZATION DURING THE EMERGENCY DRILL DID NOT MEET EXPECTATIONS OF THE ORR TEAM, FINDINGS BY THE RECENT FEB ASSESSMENT FOUND SIMILAR PROBLEMS. OTHER FINDINGS INCLUDE INFORMATION ABOUT EMERGENCY DRILL CRITIQUES IS NOT DISSEMINATED TO ALL APPROPRIATE PERSONNEL AND SOME EMERGENCY DRILLS EXAMINED WERE NOT FORWARDED TO SITE EMERGENCY PREPAREDNESS PERSONNEL WITHIN THE TWO WEEK SPECIFIED IN HNF-PR-000424.

RECOMMENDATION:

- 1) PERFORM AND DOCUMENT AN ADDITIONAL EMERGENCY DRILL FOR THE ORR TEAM. IN PREPARING FOR THIS EXERCISE, THE ORR TEAM ANTICIPATES THAT CWC WILL PERFORM AND DOCUMENT A CRITIQUE OF THE PREVIOUS DRILL, AT LEAST ONE TABLETOP EXERCISE, AND SEVERAL PRACTICE DRILLS. IMPROVEMENTS ARE EXPECTED BY PERSONNEL PARTICIPATING IN THE DRILL AND BY PERSONNEL CONDUCTING THE DRILL.
- 2) DEVELOP AND ACCOMPLISH A PLAN FOR IMPROVING OVERALL CASUALTY CONTROL AND TRAINING FOR CASUALTY CONTROL. IMPROVEMENTS SHOULD INCLUDE PERFORMANCE BASED TRAINING FOR PERSONNEL DEVELOPING AND CONDUCTING DRILLS AND FOR PERSONNEL PARTICIPATING IN THE DRILLS, INSTRUCTION IN DRILLMANSHIP AND SIMULATION FOR

PARTICIPANTS AND TRAINERS, FULLY DEVELOPED ROSTERS AND TRAINING PLANS FOR EMERGENCY ORGANIZATION PERSONNEL (RECORDERS, COMMUNICATORS, SUPPORT STAFF ETC.), AND ESTABLISHING EMERGENCY EQUIPMENT LOCATIONS ADEQUATELY STOCKED AND PROTECTED FROM DAMAGE CAUSED BY WEATHER, RODENTS AND VANDALISM. OTHER RECOMMENDATIONS ARE TRANSMIT INFORMATION FROM POST DRILL CRITIQUES TO PERSONNEL BY PERFORMING ANY OF THE FOLLOWING: REQUIRED READING, ALL PLANT MEETINGS, SAFETY MEETINGS, STAFF MEETINGS, INTER-PLANT TRANSMITTAL AND SUBMIT PRE AND POST EMERGENCY DRILL REPORTS WITHIN THE SPECIFIED TWO WEEK PERIOD.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

5/22/97
R. E. Allen

TEAM LEADER: C. J. Wolfe

EMERGENCY PREPAREDNESS
W-112 ORR DRILL CRITIQUE

An Operational Readiness Review Emergency Preparedness Drill was performed on 5/14/97. The following items have been determined less than adequate and actions will be required by the facility for closure.

1) DRILLMANSHIP LESS THAN ADEQUATE.

- * Safety Sensitivity
- * Assume drill is real and act accordingly until instructed by controller
- * Drill evaluation team needs to be trained (proper conduct during drill etc.)
- * Controllers were inadequately prepared (proper briefing before drill etc.)
- * Identify exempt personnel before drill is performed

2) COMMAND AND CONTROL NEED IMPROVEMENT.

- * BED & ICP split control of event
- * Roles & responsibilities were not defined
- * Communication system was unreliable (enhance system)
- * Communication practices need improvement (Repeat back, professionalism)
- * Bed identification poor
- * Failure to use SW-001-310 "Respond to Radioactive Mixed Waste Or Highly Toxic Waste Spill"

3) RADIOLOGICAL CONTROL'S LESS THAN ADEQUATE.

- * Contamination control practices need improvement
- * RCT personnel need better knowledge of facility
- * Personnel assume too many situations were simulated
- * Timely notification to RCT MGR need's improvement
- * Chemical hazards were not identified in detail

The observations and deficiencies noted above indicate to the ORR team that CWC personnel are not adequately prepared to deal with emergency situations. The corrective actions will require a combination of short term and longer term activities. Consequently, the ORR Team is assigning one prestartup item and one poststartup item.

Prestartup Item:

Prepare for and conduct an emergency drill for the ORR Team.

In preparing for this exercise, the ORR Team anticipates that CWC will perform and document a critique of the previous drill, at least one table top exercise, and several practice drills. Improvements are expected by personnel participating in the drill and by personnel conducting the drill.

Poststartup Item:

Develop and accomplish a plan for improving overall casualty control and training for casualty control.

The improvements should include training for personnel developing and conducting drills and for personnel participating in the drills, instruction in drillmanship and simulation for participants and trainers, fully developed rosters and training plans for casualty support personnel (recorders, communicators, support staff etc.), and establishing emergency equipment locations adequately stocked and protected from damage caused by weather, rodents and vandalism.

If you have any questions feel free to call Ron Wight at 376-2647 or Rich Allen at 373-5344.

ORR FINDING FORM

FINDING NUMBER: F.12.1.1

CORE REQUIREMENT NUMBER: 12 CORE REQUIREMENT STATEMENT: The implementation status for DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities, is adequate for operations.

CRITERIA NUMBER: 1 CRITERIA STATEMENT: The facility has implemented the WHC-CM-5-34 Conduct of Operations chapters. Specifically, for this finding, chapter 3.14, Lockout and Tagout.

DATE: 5/15/97

FINDING STATEMENT: DOE-RL-SOD-INST-L&T.001 Rev 1, Section 4.1 requires, in part, that the controlling organization's procedure specify how and where an authorized worker's lockout/tagout is applied. Section 2.9 (Lockout and Tagout) of RFSH-200 (the controlling organization's procedure which replaced WHC-CM-5-34, Section 3.14) does not specify how and where an authorized worker's lockout/tagout is applied. Specifically, instructions are not included for how and where an authorized worker's lockout/tagout is applied by itself (without documentation).

DISCUSSION/CONCLUSION: Section 3.14 of WHC-CM-5-34 has been replaced by RFSH-200, Section 2.9. Some problems occurred with this transition:

- * Responsibility is not defined in facility procedures for determining whether or not the 8 requirements defined in DOE-RL-SOD-INST-L&T.001 Rev 1 for using an authorized worker's lockout/tagout by itself are met. Interviews of personnel involved in the lockout/tagout process indicate confusion as to who is responsible for this determination and how it is to be controlled.
- * Field personnel interviewed were not aware the controlling procedure for Lockout and Tagout had been changed nor could they readily access the procedure when informed of the change.

Note: This is an administrative item in that the previous and replacement procedures are the same in content.

RECOMMENDATION: Establish in facility procedures how and where authorized worker's lockout/tagout is to be applied without documentation and establish clear responsibility for determining if the 8 requirements are met.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

S. J. Turner

TEAM LEADER: C. J. Wolfe

ORR FINDING FORM

FINDING NUMBER: F.15.2.1

CORE REQUIREMENT NUMBER:15

CORE REQUIREMENT STATEMENT: The facility systems and procedures as effected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.

CRITERIA NUMBER:2

CRITERIA STATEMENT: Operations, maintenance, surveillance, and administrative procedures implement the changes made in the approved safety basis resulting from the facility modifications.

DATE: May 20, 1997

FINDING STATEMENT: The Central Waste Complex Interim Safety Basis (HNF-SD-WM-
ISB-007 Rev.1) Administrative IOSR#6.2.2.1 which requires "lines of authority, responsibility, and communication are established and defined for the highest management levels through intermediate levels to, and including, all safety and operating organization positions". RUST correspondence RFSH-9656450, dated December 19, 1996 did not provide sufficient information to determine how this IOSR was being complied with by the facility.

DISCUSSION/CONCLUSION: Administrative IOSRs must be satisfied with the same level of rigor and structure that an engineered barrier would be for proper management of the hazard to satisfy nuclear safety requirements for a category 2 facility. The annual letter to DOE-RL RFSH-9656450 transmitted a simple organizational block diagram with referenced sections of WHC-CM-5-34 and WHC-CM-5-36 does not provide sufficient detail to assure that the requirement of the IOSR for clear and concise lines of authority, responsibility, and communication from top to bottom exist for personnel responsible for proper management of the hazards as defined in the ISB.

RECOMMENDATION: Prepare an operating document that provides the detailed responsibilities, communications, and lines of authority as delineated in the IOSR. This would be a nuclear safety based document that would describe how the organization functions to meet its responsibilities for safe management of the hazards. The document needs to include how potential organizational changes are to be evaluated to assure that proper management of the hazard and safety of the worker per the CWC Interim Safety Basis are satisfied.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: William W Bowen

William W Bowen

TEAM LEADER: Charles J Wolfe

Charles Wolfe

ORR FINDING FORM

FINDING NUMBER: F.15.3.1 (Post Start Finding)

CORE REQUIREMENT NUMBER: 15

CORE REQUIREMENT STATEMENT: The facility systems and procedures as effected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.

CRITERIA NUMBER: 3

CRITERIA STATEMENT: An adequate process has been implemented to ensure that documentation for systems critical to and support the safety of the facility exist, reflect the current facility modifications and they are reviewed for facility safety impact, and are kept current.

DATE: May 20, 1997

FINDING STATEMENT: The Solid Waste Information and Tracking System (SWITS) provides the inventory basis by which facility hazards, both radiological and chemical are evaluated to ensure a facility's design and procedural controls are adequate to meet the limits imposed by the Authorization Basis documents. However SWITS is not being managed as a nuclear safety information system.

DISCUSSION/CONCLUSION: The SWITS system is the primary tool that implements or provides data for the safe management of solid waste at the Central Waste Complex. It incorporates and/or satisfies requirements for Unreviewed Safety Questions (5480.21), Technical Safety Requirements (5480.22), Nuclear Safety (5480.23), and Criticality (5480.24) but is being managed as a programmatic data base. It is not being subjected to the reviews that a nuclear safety technical based system is for hazard management. SWITS does have a well documented change control process that includes administrative procedures and change board. It also has a well defined team that assures currency and usability for it's many customers. It was not apparent that programming had been validated as appropriate for a nuclear information data base.

RECOMMENDATION: Manage SWITS as a technical based nuclear safety system/tool to include USQ change control and acknowledge that in the appropriate sections of WHC-CM-5-34. Incorporate the current guidance documents for SWITS (HNF-IP-1097 and HNF-IP-1259) appropriately into the facility documentation.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: *William W Bowen*
William W Bowen

TEAM LEADER: *Charles J Wolfe*
Charles J Wolfe

ORR FINDING FORM

FINDING NUMBER: F.15.4.1

CORE REQUIREMENT NUMBER: 15 CORE REQUIREMENT STATEMENT: The facility systems and procedures as effected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis in the safety basis.

CRITERIA NUMBER: 4&9 CRITERIA STATEMENT: #4) Drawings and other documentation relied upon for operations and maintenance activities are consistent with the new existing plant configuration. #9) The Functional Design Criteria for modifications was utilized by the construction vendors for design, fabrication, and installation (includes ATPs and OTPs).

DATE: May 20, 1997

FINDING STATEMENT:

- 1.) The Fire Suppression system sprinklers are not installed per manufacturers data nor meet the installation drawing H-2-823231.
- 2.) The components of the fire suppression system that are used for activation of the sprinklers do not have the proper labeling required per 5480.19.
- 3.) Minimum and maximum pressure ranges for supervisory air pressure and fire main water pressure specified in the CWC surveillance procedure are broader (less restrictive) than the ranges specified in the Fire Department procedure used for testing the 2404 series building fire suppression systems.

DISCUSSION/CONCLUSION:

- 1.) It is difficult to determine the fire suppression headers and sprinklers as-installed locations due to their elevation off of the floor. It appears that the headers may not be installed to permit proper water flow after discharge and many sprinklers are not installed per the design which would hamper it's coverage during activation.
- 2.) The components of the fire suppression system that is managed by the Fire Department are not labeled or identified consistent with the balance of the facility. Discussions with staff indicated that the Fire Department wants to manage their way and not incorporate facility best practices resulting in a difference between the Memorandum of Understanding between the Hanford Fire Department and the Solid Waste Organization.
3. CWC procedure SW-040-043 establishes the minimum and maximum values for supervisory air pressure at 32.5-50 psig. Fire Department test procedure RFAR 2740 establishes the acceptable range at 36-44 psig. 043 establishes the range for water pressure at 75-150 psig and RFAR 2740 establishes the range as 86-105 psig.

RECOMMENDATION:

- 1.) Conduct a detailed inspection the fire suppression system headers and sprinklers to determine if it is both designed and installed correctly.
- 2.) The Memorandum of Understanding between Solid Waste Management and the Hanford Fire Department effectively contracts with the Fire Department to test and maintain the fire suppression systems at the storage facilities. The Central Waste Organization is still responsible for system performance, both operations, testing and maintenance. Request the Fire Department to label their contracted portions of the systems correctly, prepare and present the results of testing to all appropriate facility organizations (operations, engineering, maintenance, safety) and provide the test data to the facility for proper retention. The MOU also needs to be amended to include the 2404 facilities.
- 3) Review procedure and update accordingly.

RESOLUTION:

As of this date the Solid Waste Facility Engineering Organization has initiated a thorough review of the fire suppression system. They have been able to determine that the piping has been installed with the correct slope and the spacing between sprinklers does meet NFPA requirements. Review of the functionality of sprinklers that are adjacent to structures is continuing.

SIGNATURES:

TEAM MEMBER:
William W Bowen

TEAM LEADER: Charles J Wolfe

APPENDIX B

OBSERVATIONS

Project W-112/CWC ISB ORR Master Observations List	
No.	DESCRIPTION
1.8.1	Areas of inattention to details were observed.
1.8.2	Management involvement is needed in minor process improvement and equipment conditions.
1.8.4	* Good response to hydraulic spill. *
1.8.5	* Workers demonstrated concern for safety. *
4.3.1	Upon reviewing the ISB and supporting documentation, there appears to be an opportunity to enhance currency in the supporting documentation.
4.3.2	Upon reviewing the SW-100-110 under flammables, there appears to be an opportunity to reword the caution to make it more clear the intent of the caution.
4.3.3	Upon reviewing the SW-100-110 procedure, it was confusing as to the aisle widths and drivers which are to be applied.
4.6.1	* The facility is to be commended on its attention to safety and application in the field. *
8-1.4.1	UTILITY DISCONNECTS LISTED IN THE BUILDING EMERGENCY PLAN ARE NOT DESIGNATED BY I.D. NUMBERS.
8-1.4.2	SITE EVACUATION SIRENS ARE NOT DISCUSSED IN THE BUILDING EMERGENCY PLAN
8-3.1.1	There is no current program in place which can monitor only possible contamination release from either Phase V buildings, or the trenches which may supply wastes to Phase V.
8-3.2.1	The Phase V input waste streams can not be fully characterized wholesale, whether the facility (buildings 2404-WA, WB, WC) would contain sufficient source materials to require registration of the Phase V building as a whole. This is an item from the PRE-ORR facility management review.
8-3.2.2	The Phase V input waste streams can not be fully characterized; SWD scope of responsibility under the PHMC contract is to accept all wastes generated on site, provided that each container meets the published Hanford Waste Acceptance Criteria EP-0063-4 (soon to be rev 5). Also, the CWC is directed to accept wastes generated at selected other DOE facilities, provided that they meet the 0063 acceptance criteria.
8-3.4.1	The Phase V buildings do not have a separate PP/W-M plan. The CWC management has chosen to operate under the Hanford Site-Wide PP/W-M program. Phase V will not perform any stabilization of container wastes to reduce toxicity, availability to the environment, or reduction of potential facility worker exposure/dose. All similar actions are performed by either the generator of the container, by the WRAP facility or by SWD Generator services.

8-3.10.1	<p>This criterion addresses the general adequacy of the records management system, from the environmental perspective. CWC EC maintains an extensive regulatory issues file, as required by CM-7-5 for all facilities on site. Data retrieval is the primary requirement. Several items were requested from different sources, and a road map was given to this ORR member with which to find the requested information; some of which were located.</p> <p>As a secondary issue, the recording criteria for generating records was pursued; this path was less satisfactory. Instructions to record data are on most of the Plant Operating Procedures for a specific job task. Those POPs actually examined stated (in many cases) that the data sheet was to be given to the first line supervisor or cog manager. This person was assumed to forward those records of environmental compliance nature to the CWC EC manager.</p> <p>The Writers Guide for POPs was examined, under several headings of data sheets and records; it did not have a similar instruction to incorporate the forwarding to the CWC EC manager. This is an editorial deficiency, which apparently has been operationally closed in the past by the general expertise of the Procedure writers, without the specific guidance. CWC EC can call upon other environmental support organizations at T-Plant, 222-S Laboratory and the central Environmental Services organization at 2440 Stevens.</p>
8.3.14.1	<p>* The CWC Environmental Compliance organization is very aggressive in doing facility inspections, and maintains a log of the results in the organization office in MO-720. When the workload of the normally assigned staff is excessive, CWC EC can call upon other environmental support organizations at T-Plant, 222-S Laboratory and the central Environmental Services organization at 2440 Stevens to assist in the inspections. *</p>
8-10.7.1	<p>* The configuration control and change process for Plant Operations Procedures as a good practice. *</p>
8-11.1.1	<p>A unique records management program for Solid Waste Management that addresses all responsibilities, document controls, storage, and retrievability does not exist.</p>

12.1.1

The following deficiencies were noted during reviews of documentation and field observations of work in progress: 1) CWC Operators are reporting out of specification surveillance conditions to the Operations Team Leader. However, they are not red circling these readings as required by 5-34, Section 3.7, para. 4.6. 2) Team Leaders are not logging in the Facility Logbook periodic observations of operator rounds as required by 5-34, Section 3.7, para. 4.6. 3) SW-040-043, Inspect the CWC and Sodium Storage Building, establishes an expectation that communications be maintained with operations personnel in the complex. However, communications with these personnel is difficult because of shared radio channels, radios not working properly and operations personnel not maintaining beepers on or with adequate batteries. (Finding F.8.1.4.2 specifically addresses problems with radio communications.) 4) 5-34, Section 3.5, Rev 2, para. 2.0 cites SWD facilities as Hazard Category 3 vice Hazard Category 2 as indicated in the Interim Safety Basis document. 5) Posted criticality prevention specifications in the storage buildings are not being controlled as operator aids. Operations personnel are relying on an individual's knowledge and quarterly inspections by compliance personnel to ensure the CPS postings are current. 6) Non-active alarms on the CAM alarm panel for the 2403 series buildings are not labeled as required by 5-34, Section 3.16, 5.0.1.

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.1.8.1

CORE REQUIREMENT NUMBER: 1.0

CORE REQUIREMENT STATEMENT: There are adequate and correct procedures and safety limits for operating the process systems and utility systems.

CRITERIA NUMBER: 8

CRITERIA STATEMENT: Are personnel complying with procedures

DATE: 5/20/97

OBSERVATION STATEMENT: Areas of inattention to details were observed.

DISCUSSION/CONCLUSION: The following items were observed and attributed to inattention to details

- A fire extinguisher was found missing a seal at FS-22.
- Floor quadrant signs in 2403-WD south end of the building were covered or rubbed off.
- Procedure SW-040-043 step 49 incorrectly identifies going to step 51 instead of step 50.
- Spill kit inventory sheets have the nylon strap section left blank instead of checking or putting "N/A".
- Several Radiological posting signs were observed to have inserts not properly in place on the signs. The top inserts are falling behind the bottom insert inside of the sign.
- 2403-WB had two administrative mistakes on the survey postings at the building which the RCT corrected.

RECOMMENDATION: Re-enforce that details matter with all personnel.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

R. Pickett

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.1.8.2

CORE REQUIREMENT NUMBER: 1.0

CORE REQUIREMENT STATEMENT: There are adequate and correct procedures and safety limits for operating the process systems and utility systems.

CRITERIA NUMBER: 8

CRITERIA STATEMENT: Are personnel complying with procedures

DATE: 5/20/97

OBSERVATION STATEMENT: Management involvement is needed in minor process improvement and equipment conditions.

DISCUSSION/CONCLUSION: The following items were observed and indicated management needs more involvement in minor process improvements.

- A temporary label has been in place over 5 months at FS-21.
- RCT vehicle has a flag on it which is connected using duct tape.
- Truck HO-68B-4640 has a rope attached to the door strap to make it easier to close. The rope is taped together with HP tape.
- RCT indicated that a sign was being made for 2403-WB which would say something like contact RCT for current radiological dose rates because the area dose rates in the building were changing daily.
- The RCT had to use a trailer which happen to be in the area to shield his GM to keep the background below 200 cps for reading his smears.
- An operator indicated that the scanners have a problem reading the labels in the direct sunlight.
- The truck used to deliver drums did not have a radio to report a hydraulic leak and spill.
- Drum labels are frequently coming loose or coming off and their verbal policy is not reflected in their procedures.
- Fire extinguisher tags come off frequently due to the wind and their locations.
- Loose scrap banding is piled on the floor throughout the active buildings for re-use. A bin or other container could be used to store the material.

The above items are minor in nature but indicate a need to focus a little more attention to what may improve their work process.

RECOMMENDATION: Management work with operators, truck drivers, RCTs, and other bargaining unit personnel to quickly resolve minor problems and create positive dialogue for process improvement.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: R. D. Pickett

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.1.8.4

CORE REQUIREMENT NUMBER: 1 CORE REQUIREMENT STATEMENT: There are adequate and correct procedures and safety limits for operating the process systems and utility systems.

CRITERIA NUMBER: 8 CRITERIA STATEMENT: Are personnel complying with procedures

DATE: 5/20/97

OBSERVATION STATEMENT: Correct response to hydraulic spill.

DISCUSSION/CONCLUSION: The operators, truck driver, and RCT responded appropriately and per procedure to a hydraulic leak on the truck.

RECOMMENDATION:

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

R. D. Pickett

TEAM LEADER:

C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.1.8.5

CORE REQUIREMENT NUMBER: 1 CORE REQUIREMENT STATEMENT: There are adequate and correct procedures and safety limits for operating the process systems and utility systems.

CRITERIA NUMBER: 8 CRITERIA STATEMENT: Are personnel complying with procedures

DATE: 5/20/97

OBSERVATION STATEMENT: Workers demonstrated concern for safety

DISCUSSION/CONCLUSION: The workers demonstrated that they were concerned about safety of themselves and others and worked effectively together in the following examples.

- RCT reminded someone to stay back from some drums to minimized exposure.
- An operator was deliberate and cautions about accessing areas where snakes and spiders have been a problem in the past.
- An operator identified a hazard during the spill drill which had not been considered during the development of the drill, the fork truck was running tipped over on its side introducing an fire and fume hazard.
- An operator, RCT, and driver worked with each other effectively while moving drums.

RECOMMENDATION:

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

R. D. Pickett

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.4.3.1

CORE REQUIREMENT NUMBER: 4 **CORE REQUIREMENT STATEMENT:** 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 protects 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 NUMBER: 3 **CRITERIA STATEMENT:** Documentation provides for the protection of the worker and the public.

DATE: 5-21-97

OBSERVATION STATEMENT: Upon reviewing the ISB and supporting documentation, there appears to be an opportunity to enhance currency in the supporting documentation.

DISCUSSION/CONCLUSION: Current ISB accident scenarios confirm that criticality is not credible based upon unmitigated accidents. The CSER and CPS supporting that conclusion is well documented in a generic sense. There is an opportunity to clarify facility unique configurations giving the user information that the upset conditions, both unmitigated and mitigated, are addressed.

RECOMMENDATION: Suggest as part of the upgrade program for authorization basis, revisiting critical supporting documentation on an annual basis similar to the requirement in DOE 5480.23 for maintaining currency.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

John A. Locklair

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.4.3.2

CORE REQUIREMENT NUMBER: 4

CORE REQUIREMENT STATEMENT: 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 protects 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 NUMBER: 3

CRITERIA STATEMENT: Documentation provides for the protection of the worker and the public.

DATE: 5-20-97

OBSERVATION STATEMENT: Upon reviewing the SW-100-110 under flammable there appears to be an opportunity to reword the caution to make it more clear the intent of the caution.

DISCUSSION/CONCLUSION: Under Section E of the procedure Flammable acids are segregated from other flammable waste by a 3-foot separation. This could be construed as other flammable acid containers which I don't believe is the intent.

RECOMMENDATION: Reword the caution to reflect the true intent.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

John A. Locklair

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.4.3.3

CORE REQUIREMENT NUMBER: 4 **CORE REQUIREMENT STATEMENT:** 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 protects 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 NUMBER: 3 **CRITERIA STATEMENT:** Documentation provides for the protection of the worker and the public.

DATE: 5-20-97

OBSERVATION STATEMENT: Upon reviewing the SW-100-110 procedure it was confusing as to the aisle widths and drivers which to be applied.

DISCUSSION/CONCLUSION: There are instructions in the procedure for 3 foot segregation, 30 inch inspection aisles, and 3 foot aisles. It was a bit confusing to understand the requirement and application.

RECOMMENDATION: Suggest rewording and clarifying requirements to include drivers such as RCRA, FHA, or ISB commitments.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: John A. Locklair

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.4.6.1

CORE REQUIREMENT NUMBER: 4

CORE REQUIREMENT STATEMENT: 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 protects 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 NUMBER: 6

CRITERIA STATEMENT: A program is in place that identifies workplace hazards and the information is used in planning and conducting facility work. Documentation provides for the protection of the worker and the public.

DATE: 5-20-97

OBSERVATION STATEMENT: The facility is to be commended on its attention to safety and application in the field.

DISCUSSION/CONCLUSION:

RECOMMENDATION: There is a uniform commitment to worker safety that is implemented from senior management down to the worker level. The Job Hazards Analysis, Radiation Work Permit, ALARA program, Joint Review Committee, Safety Log Book, and safety council are mechanisms by which safety issues can be addressed. Additional oversight is provided by dedicated safety professionals involved in the development of workplans, procedures, and observation of work activities.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: John A. Locklair

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-1.4.1

CORE REQUIREMENT NUMBER: 8-1 CORE REQUIREMENT STATEMENT: THERE IS AN ADEQUATE EMERGENCY PREPAREDNESS ORGANIZATION AND PROGRAM.

CRITERIA NUMBER: 8-1.4 CRITERIA STATEMENT: FACILITIES, EQUIPMENT, AND RESOURCES ARE IN PLACE AND ADEQUATE TO SUPPORT EMERGENCY RESPONSE OPERATIONS AND ENSURE THE PROTECTION OF ALL PERSONNEL (e.g., EMERGENCY OPERATIONS CENTER, BACKUP OR ALTERNATIVE FACILITIES, PRIMARY AND BACKUP COMMUNICATION, ALARM ADEQUATE TO NOTIFY PERSONNEL, TRANSPORTATION, MEDICAL TREATMENT, RESPIRATORY EQUIPMENT, EXPOSURE CONTROLS, INSTRUMENTATION TO MEASURE EXPOSURE, ETC.

DATE: 5/20/97

OBSERVATION STATEMENT: UTILITY DISCONNECTS LISTED IN THE BUILDING EMERGENCY PLAN ARE NOT DESIGNATED BY I.D. NUMBERS.

DISCUSSION/CONCLUSION: DURING WALK AROUNDS WITH PLANT PERSONNEL IT WAS CLEAR THAT PERSONNEL COULD NOT DISCONNECT ELECTRICAL POWER TO MANY OF THE STORAGE BUILDINGS IN A TIMELY MANNER. MANY OF THE BUILDINGS HAD SEVERAL ELECTRICAL PANELS AND PERSONNEL WERE NOT SURE OF WHICH BREAKER TO OPEN.

RECOMMENDATION: REVISE THE BUILDING EMERGENCY PLAN TO LIST SPECIFIC ELECTRICAL BOX PANEL/BREAKER ID NUMBERS FOR ELECTRICAL POWER DISCONNECTION DURING EMERGENCY CONDITIONS.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

5/22/97
R. E. Allen

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-1.4.2

CORE REQUIREMENT NUMBER: 8-1 CORE REQUIREMENT STATEMENT: THERE IS AN ADEQUATE EMERGENCY PREPAREDNESS ORGANIZATION AND PROGRAM.

CRITERIA NUMBER: 8-1.4 CRITERIA STATEMENT: FACILITIES, EQUIPMENT, AND RESOURCES ARE IN PLACE AND ADEQUATE TO SUPPORT EMERGENCY RESPONSE OPERATIONS AND ENSURE THE PROTECTION OF ALL PERSONNEL (e.g., EMERGENCY OPERATIONS CENTER, BACKUP OR ALTERNATIVE FACILITIES, PRIMARY AND BACKUP COMMUNICATION, ALARM ADEQUATE TO NOTIFY PERSONNEL, TRANSPORTATION, MEDICAL TREATMENT, RESPIRATORY EQUIPMENT, EXPOSURE CONTROLS, INSTRUMENTATION TO MEASURE EXPOSURE, ETC.

DATE: 5/20/97

OBSERVATION STATEMENT: SITE EVACUATION SIRENS ARE NOT DISCUSSED IN THE BUILDING EMERGENCY PLAN.

DISCUSSION/CONCLUSION: PERSONNEL HAVE BEEN TRAINED TO EVACUATE/TAKE COVER DURING SIREN SOUNDINGS PER HGET TRAINING. AN AWARENESS THAT SITE EMERGENCY SIRENS ARE LOCATED NEAR THE FACILITY SHOULD BE STATED IN THE BUILDING EMERGENCY PLAN.

RECOMMENDATION: AWARENESS OF OUTER PERIMETER EVACUATION/TAKE COVER SIRENS SHOULD BE PLACED IN THE BUILDING EMERGENCY PLAN.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

5/22/97
R. E. Allen

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-3.1.1

CORE REQUIREMENT NUMBER: 8.3

CORE REQUIREMENT STATEMENT: There is an adequate Environmental Protection organization and program.

CRITERIA NUMBER: 8.3.1c

CRITERIA STATEMENT: Is a Groundwater Monitoring protocol in place, to monitor possible contamination release from Phase V or from trenches which may provide wastes to be received by Phase V?

DATE: May 20, 1997

OBSERVATION STATEMENT:

There is no current program in place which can monitor only possible contamination release from either Phase V buildings, or the trenches which may supply wastes to Phase V.

DISCUSSION/CONCLUSION: This condition is a requirement in the current S/RID, section 20.3 and WAC 173-303-645. Discussion with CWC EC staff revealed that the current CWC philosophy continues a pre-PHMC approach, letting PNNL provide groundwater monitoring. Therefore, this is an issue needing correction in the S/RIDs.

Should CWC/SWD so decide, there are numerous RCRA-compliant monitoring wells in the 200-West Area, which are used to show that the entire 200-West Area meets requirements similar to this one. Results from these and other wells outside the 200-West boundary fence are collected for the annual Hanford Environmental Report (PNNL-11139, issued Sept 1996, for calendar year 1995).

The groundwater flow pattern is presented in the annual report; has been calculated beneath the 200-West Area for other programs; and the data should be available to comply with this requirement should it be determined.

RECOMMENDATION: The SWD/CWC management needs to review and update the S/RID document. It should determine what roles/responsibilities/requirements will be followed, consistent with the current PHMC contract, and memoranda of understanding with other primary site contractors.

A determination of significance needs to be made whether this requirement for CWC can be folded into the reporting for the entire 200-West Area possible releases. Concurrence with State regulators should also be sought for the final decision.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: J. I. Gould

5-22-97

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-3.2.1

CORE REQUIREMENT NUMBER: 8.3 CORE REQUIREMENT STATEMENT: There is an adequate Environmental Protection organization and program.

CRITERIA NUMBER: 8.3.2a CRITERIA STATEMENT: Has the Phase V facility input waste stream been evaluated for potential-to-emit purposes, and is the facility going to be registered as a Toxic Air Pollutant (TAPs) source, per WAC 174-400-110 and 173-400-030.

DATE: May 20, 1997

OBSERVATION STATEMENT:

The Phase V input waste streams can not be fully characterized in total; many container records are only category types and not quantified. A separate evaluation -- would be needed to determine if buildings 2404-WA, -WB, -WC contain sufficient source materials to require registration of the any Phase V building as a whole.

DISCUSSION/CONCLUSION: Toxic Air Pollutant registration, if necessary, should be undertaken for only one building at a time. A systematic review of the container inventory on the SWITS database should be made, and a potential to emit for the same worst-case container breach accident used to determine a reasonable administrative control level for the number of vented drums, from each potential generator. As long as this inventory control is not exceeded, there would be no need for TAPs registration.

RECOMMENDATION: The SWD/CWC management needs to complete the evaluation of Phase V conditions affecting possible TAPs registration. If TAPs registration is necessary, then a strategy should be developed which would require registration of the minimum number of buildings, consistent with the current operational policy of the CWC for Phase V.

No wastes in vented containers should be accepted into the Phase V buildings, until this evaluation is completed. This is an action item from the Pre-ORR facility management review. Actionee is Kent McDonald, manager Environmental Compliance and Training.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: J. I. Gould

5-22-97

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-3.2.2

CORE REQUIREMENT NUMBER: 8.3 CORE REQUIREMENT STATEMENT: There is an adequate Environmental Protection organization and program.

CRITERIA NUMBER: 8.3.b CRITERIA STATEMENT: Is a complete list of the expected input waste streams (including designations) posted in the Phase V facility for reference by facility workers and external oversight personnel? Is documentation incorporated in the Phase V portion of the SAD Interim Safety Basis document? This is a requirement from the S/RID, section 20.2.

DATE: May 20, 1997

OBSERVATION STATEMENT:

The Phase V input waste streams can not be fully characterized. SWD scope of responsibility under the PHMC contract is to accept all wastes generated on site, provided that each container meets the published Hanford Waste Acceptance Criteria EP-0063-4 (soon to be rev 5). Also, the CWC is directed to accept wastes generated at selected other DOE facilities, provided that they meet the 0063 acceptance criteria.

DISCUSSION/CONCLUSION: The Phase V buildings have been designed, evaluated, and registered for operation under the assumptions of the upgraded ISB. The inability to predict all potential input waste streams is not a function of the operational limits of either the ISB or the acceptance criteria (0063 document). Rather, this is an issue of comparability between the S/RIDs, and current scope of proposed operation.

RECOMMENDATION: The CWC/SWD management needs to include this criterion in consideration of the applicability of individual S/RIDs requirements for the Phase V and other storage buildings. This observation can be closed simultaneously with observation 0.8.3.1.1, following the review/evaluation and revision of the S/RIDs for applicability.

Collection of the requirements for facility waste operations in a single referable document, represents a best management practice, with opportunity for process improvements. This issue is related to Phase V conduct of operations.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: J. I. Gould

5-22-97

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-3.4.1

CORE REQUIREMENT NUMBER: 8.3

CORE REQUIREMENT STATEMENT: There is an adequate Environmental Protection organization and program.

CRITERIA NUMBER: 8.3.4a

CRITERIA STATEMENT: Is a Pollution Prevention/Waste Minimization plan (goals, procedures, training, schedules, etc) being effectively implemented for the Phase V? Does the PP/W-M plan have a written policy showing local and corporate management support for implementation? Will wastes be treated or otherwise stabilized to reduce toxicity, availability to environment, reduce facility worker dose, etc) during storage? This is a requirement from the S/RID, section 20.5.

DATE: May 20, 1997

OBSERVATION STATEMENT: The CWC does not have a separate PP/W-M plan for Phase V operation. The CWC management has chosen to operate under the Hanford Site-Wide PP/W-M program. Phase V will not perform any stabilization of container wastes to reduce toxicity, availability to the environment, or reduction of potential facility worker exposure/dose.

DISCUSSION/CONCLUSION: The S/RIDs do not state whether individual facilities such as CWC/Phase V should be required to implement a separate PP/W-M program. All similar actions are performed by either the generator of the container, by the WRAP facility or by SWD Generator services.

In the view of this ORR member, SWD or its parent organization RFSH/WMX, needs its own PP/W-M program. Operation under the present Hanford Site-wide PP/W-M program is not good business practice, due to divisions of responsibility which are in effect under the PHMC contract. CWC staff can improve the cultural climate for awareness of environmental impacts through the use of PP/W-M techniques and setting of appropriate goals. This will be useful when Phase V begins to accept containers directly retrieved from burial trenches.

RECOMMENDATION: The CWC/SAD management needs to include this criterion for consideration of applicability of individual S/RIDs requirements for the Phase V and other storage buildings. This observation can be closed simultaneously with observation 0.8.3.1.1, following the evaluation of the S/RIDs for applicability.

RESOLUTION:

SIGNATURES:

TEAM MEMBER: D. I. Gould

5-22-97

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-3.10.1

CORE REQUIREMENT NUMBER: 8.3 CORE REQUIREMENT STATEMENT: There is an adequate Environmental Protection organization and program.

CRITERIA NUMBER: 8.3.10f CRITERIA STATEMENT: Are procedures in place to provide the following information in required (annual) reports: Emissions inventory, monitoring, investigation by oversight groups, demonstration/testing for regulatory compliance, air flow rate(s), emission logs, shutdown notifications, decontamination/decommissioning/closure, etc?

DATE: May 20, 1997

OBSERVATION STATEMENT:

The CWC EC maintains an extensive regulatory issues file, as required by CM-7-5 for all facilities on site. Data retrieval was judged satisfactory for environmental issues.

A second issue, the recording criteria for generating records was pursued; this path was less satisfactory. Instructions to record data are on most of the Plant Operating Procedures for a specific job task. Those POPs actually examined stated (in many cases) that the data sheet was to be given to the first line supervisor or cog manager. This person was assumed to forward those records of environmental compliance nature to the CWC EC manager.

The Writers Guide for POPs was examined, under the headings of data sheets and records; it did not have a similar instruction to incorporate the forwarding to the CWC EC manager. This is an editorial deficiency, which has been operationally closed in the past by the general expertise of the Procedure writers, without the specific guidance.

DISCUSSION/CONCLUSION: This criterion addresses the general adequacy of the records management system, from the environmental perspective. The Facility Evaluation Board report, which was part of the background reading for the ORR Team, implied that the CWC EC organization was weak in its personnel support, covering deficiencies in other areas of application.

This ORR member investigated the possible impact of the FEB conclusions, and found that the CWC EC organization is suitably staffed, and in the case of multiple emergencies, or other schedule conflicts is able to call for temporary assistance from several other environmental organizations.

Adequacy of records retrieval was demonstrated. Several items were requested from different sources, and a road map was given to this ORR member with which to find the requested information; several of which were physically located.

CWC EC can call upon other environmental support organizations at T-Plant, 222-S Laboratory and the central Environmental Services organization at 2440 Stevens.

This criterion is similar to I-P Criterion 8.3.5: "Is a procedure in place to maintain a log of inspections for compliance of Phase V stored wastes. Are sufficient numbers of environmental personnel available to support these inspections?"

The Writers Guide for POPs was examined, under several headings of data sheets and records; it did not have a similar instruction to incorporate the forwarding to the CWC EC manager. This is an editorial deficiency, which apparently has been operationally closed in the past by the general expertise of the Procedure writers, without the specific guidance.

RECOMMENDATION: The CWC EC management has been very pro-active in developing cross-training for backup within its own staff, and interfaces with the other SWD facilities and the central ES organizations. It participates in regular Environmental Compliance Officer meetings, as well as one-on-one consulting to define issues and develop strategy. This is a good business practice, and is a positive note for the CWC EC organization, and should be continued.

The Writers' Guide for POPs should be reviewed and revised to clarify further disposition of records generated by individual POPs, as appropriate.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

J. I. Gould
5-22-97

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8.3.14.1

CORE REQUIREMENT NUMBER: 8.3

CORE REQUIREMENT STATEMENT: There is an adequate Environmental Protection organization and program.

CRITERIA NUMBER: 8.3.14

CRITERIA STATEMENT: Personnel in the environmental compliance organization have the needed knowledge, skills, and abilities to conduct the program.

DATE: May 20, 1997

OBSERVATION STATEMENT:

The CWC Environmental Compliance organization is very aggressive in doing facility inspections, and maintains a log of the results in the organization office in MO-720.

When the workload of the normally assigned staff is excessive, CWC EC can call upon other environmental support organizations at T-Plant, 222-S Laboratory and the central Environmental Services organization at 2440 Stevens to assist in the inspections.

DISCUSSION/CONCLUSION: The Facility Evaluation Board report, which was supplied as part of the background reading for the ORR Team, implied that the CWC EC organization was weak in its personnel support, covering deficiencies in other areas of application. This ORR member investigated the possible impact of the FEB conclusions, and found that the CWC EC organization is suitably staffed, and in the case of multiple emergencies, or other schedule conflicts is able to call for temporary support from several other environmental organization, as noted.

This criterion is similar to Criterion 5, which requires: Is a procedure in place to maintain a log of inspections for compliance of Phase V stored wastes. Are sufficient numbers of environmental personnel available to support these inspections?

RECOMMENDATION: The CWC EC management has been very pro-active in developing cross-training for backup within its own staff, and interfaces with the other SWD facilities and the central ES organizations. It participates in regular Environmental Compliance Officer meetings, as well as one-on-one consulting to define issues and develop strategy. This is a good business practice, and is a positive note for the CWC EC organization.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

J. I. Gould

5-22-97

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-10.7.1

CORE REQUIREMENT NUMBER: 8-10

CORE REQUIREMENT STATEMENT: There exists an adequate configuration management program to assure necessary change and drawing control of plant structures, systems, and components and to assure changes are reflected in training, procedure development, maintenance instructions, and technical baseline.

CRITERIA NUMBER: 7

CRITERIA STATEMENT: An administrative program is in place to ensure that modifications are analyzed, documented, approved by appropriate personnel and organizations, and reflected in design drawings, new/revised procedures and training materials.

DATE: 05/15/97

OBSERVATION STATEMENT: Noted the configuration control and change process for Plant Operations Procedures as a 'Good Practice'. All current Plant Operations Procedures (POPs) and all associated illustrations and figures are available electronically on a shared drive. Changes to POPs are initiated and authorized using a Document Change Request (DCR) form. Draft procedure changes are routed for review and approval using a Document Acceptance Review Form (DARF). Procedures with changes in-process are all indexed on a master status tracking list. This status list is available (read only) to all employees electronically and includes the responsible individual currently assigned a review/comment action. Once a POP revision has been approved, the electronic version of the new/revised procedure is made available on the shared drive. A hard copy listing of all current controlled POPs is printed daily for quick procedure control reference (this list is also available on the shared drive). An entire hard copy set of all the current POPs is maintained for use in the event that the network is down. A revision history of procedure changes, including the entire electronic versions of all previous procedure revisions, is available for the past two (2) years.

DISCUSSION/CONCLUSION:

RECOMMENDATION:

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

T. J. Powell

TEAM LEADER: C. J. Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.8-11.1.1

CORE REQUIREMENT NUMBER: 8.11

CORE REQUIREMENT STATEMENT: An adequate records management/document program exists to assure that all important documents, records, and related information are maintained current and readily retrievable.

CRITERIA NUMBER: 1

CRITERIA STATEMENT: The records management program defines responsibilities for determining what documents will be controlled in a system; methods used for acquisition, identification, storage, retention, and retrieval of documents; and controls to be exercised for changes, distribution, and removal.

DATE: May 20, 1997

OBSERVATION STATEMENT: A unique records management program for Solid Waste Management that addresses all responsibilities, document controls, storage, and retrievability does not exist.

DISCUSSION/CONCLUSION: The review conducted for this core requirement was to assure that documentation associated with both project W112 and implementation of the CWC Interim Safety Basis was being properly controlled, retained, and retrieved. It was very difficult to review a non-existent program, although the records for maintenance, operations, and engineering were each being addressed independently from the others and appeared to be adequate.

RECOMMENDATION: Facility management needs to determine if the current records management processes are appropriate for a nuclear facility organization with hazard category 2 responsibilities. It is suggested that a management self assessment be conducted that looks at Records/Document Management from the top down which would result in a measure of confidence that the current processes meet all requirements and customer needs.

RESOLUTION:

SIGNATURES:

William W Bowen

Charles J Wolfe

TEAM MEMBER: William W Bowen

TEAM LEADER: Charles J Wolfe

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0.12.1.1

CORE REQUIREMENT NUMBER: 12 CORE REQUIREMENT STATEMENT: The implementation status for DOE Order 5480.19, Conduct of Operations Requirements for DOE Facilities, is adequate for operations

CRITERIA NUMBER: 1 CRITERIA STATEMENT: The facility has implemented the WHC-CM-5-34 Conduct of Operations chapters.

DATE: MAY 21, 1997

OBSERVATION STATEMENT: The following deficiencies were noted during reviews of documentation and field observations of work in progress:

- 1) CWC Operators are reporting out of specification surveillance conditions to the Operations Team Leader. However, they are not red circling these readings as required by 5-34, Section 3.7, para. 4.6.
- 2) Team Leaders are not logging in the Facility Logbook periodic observations of operator rounds as required by 5-34, Section 3.7, para. 4.6.
- 3) SW-040-043, Inspect the CWC and Sodium Storage Building, establishes an expectation that communications be maintained with operations personnel in the complex. However, communications with these personnel is difficult because of shared radio channels, radios not working properly and operations personnel not maintaining beepers on or with adequate batteries. (Finding F.8.1.4.2 specifically addresses problems with radio communications.)
- 4) 5-34, Section 3.5, Rev 2, para. 2.0 cites SWD facilities as Hazard Category 3 vice Hazard Category 2 as indicated in the Interim Safety Basis document.
- 5) Posted criticality prevention specifications in the storage buildings are not being controlled as operator aids. Operations personnel are relying on an individual's knowledge and quarterly inspections by compliance personnel to ensure the CPS postings are current.
- 6) Non-active alarms on the CAM alarm panel for the 2403 series buildings are not labeled as required by 5-34, Section 3.16, 5.0.1.

DISCUSSION/CONCLUSION: These deficiencies were found during comprehensive reviews of conduct of operations documentation and practices at the CWC facility and are not indicative of programmatic failures for any of the areas reviewed.

RECOMMENDATION: Establish corrective actions for the above items on a not to delay startup of the Phase V buildings basis.

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

S. J. Turner

TEAM LEADER: C. J. Wolfe

APPENDIX C

LINES OF INQUIRY

Core Requirement 1.0 There are adequate and correct procedures and safety limits for operating the process and utility systems.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
References: WHC-CM-5-34, 3.22 ISB-007, Rev 0 TSR-005				
1. Have operating procedures been updated to reflect ISB requirements and the addition of 2404 buildings?	SW-001-310, 330 SW-040-043, 051 SW-100-110 SW-150-003, 005	All procedures reviewed have been updated to reflect ISB/IOSR requirements, are considered technically correct and include the 2404 buildings.	X	
2. Do operating procedures accurately incorporate IOSR administrative controls?	SW-001-310, 330 SW-040-043, 051 SW-100-110 SW-150-003, 005	All procedures reviewed have been updated to reflect ISB/IOSR requirements, are considered technically correct and include the 2404 buildings.	X	
3. Are technical details correct and consistent between operating procedures, drawings, systems descriptions and training?	SW-001-310, 330 SW-040-043, 051 SW-100-110 SW-150-003, 005	All procedures reviewed have been updated to reflect ISB/IOSR requirements, are considered technically correct and include the 2404 buildings. Procedure SW-001-310 is missing steps from the BEP, HNF-IP-0263-CWC. (Details included in findings and observations.)		X
4. Is a program in place that ensures periodic review and update of procedures?	Procedure change program Jan Van Slyck	The facility has all procedures on the I drive with one set of goldenrod procedures as backup. The procedure administrator has a number of internal control mechanisms in place to ensure procedures are updated and to ensure comments on procedures are dispositioned. DARFs are used for review and approval.	X	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
5. Are temporary procedure change controls specified and being followed?	No temporary procedure changes were found.	Not Observed		
6. Is training provided to operations personnel on procedure changes prior to use?	Required reading Attended a training session provided by R. Ames for the ISB Reviewed ISB training records	Required reading is the principal tool used for procedure changes and is routed to operations personnel for review and signature. ISB implementation training was provided and documented for operations personnel. Training provided for the review team on 5/14/97 covered the key elements in the IOSRs.	X	
7. Is training on procedure changes documented?	Required reading	Procedure changes are routed through operations personnel for review and signature. The Operations Secretary and CWC Team Leader progress required reading. As noted above, special training was provided for ISB implementation.	X	
8. Are personnel complying with procedures in the field?	Observed work using the following procedures: SW-001-310, SW-040-043, and SW-100-110	Procedures were not used during an observed drill and some steps were missed. Found some instances of inattention to detail in following procedures. Some fire system components were found to be missing labels in 2404 series buildings. (Details are included in findings and observations.)		X

PHASE V STORAGE ORR APPRAISAL FORM

Training 2.1

CORE REQUIREMENT: Training and qualification programs for operations and operations support personnel have been established, documented, and implemented (the training and qualification programs encompass the range of duties and activities required to be performed).

APPROACH: Review training goals, procedures, and records. Interview training personnel. Observe, if possible, trained personnel performance.

CRITERIA: Training and qualification programs for operations and operations support personnel have been established, documented, and implemented.

1. Procedures are developed and implemented that describe the qualification process.
2. Procedures include examination requirements for certification of operations and maintenance personnel, requalification, maintenance of proficiency, granting of exceptions and extensions, alternatives to educational requirements, remediation, and evaluations by facility and training management.
3. Goals, objectives, and plans are in place to describe the implementation of the training and qualification programs.
4. Classroom training is conducted in accordance with formal lesson plans based to established learning objectives.
5. Written and oral examinations are used to evaluate trainee comprehension of training content.
6. Training programs incorporate formal on-the-job training (OJT) and hands-on evaluation of skills.
7. The qualification program includes requirements for successful completion of written, oral, operations evaluations for operations and maintenance personnel.
8. Procedures are in place to ensure that non-resident personnel have received the proper training for escorted and unescorted access to the CWC and are current in their training requirements.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	ACCEPTABLE	
			YES	NO

1) Review training and qualification records for operators, maintenance personnel, shift technical engineers, and supervisors, including results of written, oral, and operational evaluations, to ensure the training program is being formally administered.	Reviewed training records for 4 Engineers and Lead Personnel and training records for 4 NPOs.	Training program is being formally administered.	X	
2) Verify 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 or certification.	"	Training records are maintained neat and orderly, all information is in the file, required information is present. Records are easily auditable.	X	
3) Review the evaluation and self-assessment program for involvement by facility and training management in program, instructor (classroom and OJT), and training materials assessment.	CM-5-34, Section 1.8, para. 5.4.4, para. 5.4.5 Manager, Environmental Compliance and Training	There is a HATS item for training evaluation resulting from the FEB evaluation. Item is due to complete by 6/30/97.	X	
4) Review the remedial training program for adequacy.	CM-5-34, Section 1.8 Manager, Environmental Compliance and Training	Procedure is adequate. Program is implemented -- self study focussed.	X	
5) Review the CMC access control procedures for positive control of non-resident personnel.	CM-5-34, Section 1.8	Access Control procedure is adequate and provides for positive control of visitors. (Field visit reveals that access is not positively controlled. Although procedure is adequate, implementation allows visitor to bypass the check-in point and to enter facility unmonitored)	X	
6) Review the written goals and objectives related to the implementation of the training and qualification processes and ensure they are documented in strategic plans and that the goals and objectives adequately address the current issues that are important to both contractor management and DOE.	CM-5-34, Section 1.8, Rev. 4 4/1/96 K. McDonald J. Carlson	Training plan is satisfactory and contains all elements for a successful program. FEB report noted weakness in documentation of training package development. Program is in process to develop new training packages to guidelines of DOE Order 5480-.20A. Due at end of FY1997.	X	

7) Interview training personnel to determine if they have sufficient experience and qualifications for assessing operations and maintenance personnel. (Interview questions directed specifically to previous experience and qualifications, certifications, or training for accomplishing this objective.)	K. McDonald J. Carlson L. Olson M. McLellan C. Haas	Experience and qualifications include appropriate training instructor courses and certification, thorough plant knowledge, holding advanced degree in an appropriate field, Management experience, Naval Nuclear experience.	X	
8) Observe operator, operations support personnel, or supervisor examinations, by attending oral or operational evaluations (OJT), if possible.	N/A			
9) Verify that personnel demonstrate knowledge of activities and evolutions that were included in their training program.	See Core Requirement #3.			

PHASE V STORAGE ORR APPRAISAL FORM

Training 2.2

CORE REQUIREMENT: Training and qualification programs for operations and operations support personnel have been established, documented, and implemented (the training and qualification programs encompass the range of duties and activities required to be performed).

APPROACH: Review training program content. Interview training personnel. Observe training in process.

CRITERIA: The training and qualification programs encompass the range of duties and activities required to be performed.

9. The tasks required for the personnel working in the CWC are identified and documented through a systematic analysis of job requirements.
10. The training program is based on the results of this analysis. Learning objectives are derived from the analysis.
11. Requirements for continuing training have been adequately defined and programs have been developed.
12. Continuing training includes conduct of realistic drills to maintain proficiency in responding to abnormal and accident situations, including those involving radiological and dangerous waste hazards.
13. Training programs for operations and maintenance personnel include training on the requirements contained in the approved operating basis for the facility.
14. Training programs for operations and maintenance personnel emphasize the importance of compliance with procedures and safety requirements.
15. Training for technical staff personnel is based on an assessment of position duties and responsibilities associated with operating the CWC.
16. The training department uses post-training feedback, internal evaluations (self assessment), and operating experience to modify the training program when needed. This includes:
 - o Using feedback on training effectiveness from trainees and supervisors
 - o Incorporating feedback from operating experience at the site and from other DOE sites
 - o Conducting formal reviews of training effectiveness
 - o Incorporating comments from line management self-assessments and other audits.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	ACCEPTABLE	
			YES	NO
1) Review operations and maintenance lesson plans for incorporation of safety requirements; technical safety requirements, operational safety requirements, and procedure compliance.	Lesson Plan Course W-112: a. New Authorization Basis for the Central Waste Complex. b. Central Waste Complex W-112 Project (2404W series buildings) Orientation Update.	Meets requirements.	X	
2) Review trainee feedback forms, training evaluations of lessons learned from operating experiences, and formal training program reviews to verify feedback is addressed in a formal manner.	K. McDonald	Feedback solicited; received by instructor. Instructor reviews and assesses. Training Manager reviews and decides whether change is required or not. Resolution to FEB comment will incorporate feedback comments designated for inclusion and remaining unincorporated.	X	
3) Review the continuing training program plan and drill schedule to verify its adequacy to support safe operations.	K. McDonald	Continuing training consists primarily of required reading program, monthly safety meeting topics, and personnel briefing for significant technical issues. HATS item from FEB comment to upgrade the recertification program and include formal continuing training aspect. Drill training schedule meets minimum requirements. (Demonstration off normal exercise was unsatisfactory, indicating Drill training program is marginal.)	X	
4) Review the systematic analysis of job requirements conducted to provide reasonable assurance that all tasks essential to safe and efficient operation of the CWC are addressed by the training program.	K. McDonald J. Carlson	A systematic approach is being performed for revising the training materials. Resulting product will be based on operating procedures and Authorization Basis requirements. Process will meet 5480.20A requirements. Some portions are complete or nearly complete: Needs Analysis, Job Analysis, Task/Training Correspondence Chart, Task Analysis. Revision and upgrade program is scheduled to complete by the end of FY1997.	X	
5) Verify that subject matter experts, line management, and training staff developed and maintain a valid CWC operations task list as the basis for the training program.		See item 4.)		
6) Verify that the current facility safety analysis report, operating procedures, technical and professional references, and facility/industry operating experience are used to identify training content and information for use in developing training materials.		See item #4)		

7) Review the degree to which on-the-job training and hands-on evaluations for operations and maintenance personnel are used to reinforce classroom activities.	R. Robbins	Lead OJT Evaluator described OJT and OJT evaluation process. Nearly a one-on-one training process. Process emphasizes application of classroom knowledge to job performance. Remedial program reinforces weak knowledge. Management led oral examinations complete the reinforcing.	X	
8) Interview training personnel responsible for training and drill scenario development and implementation. Interview personnel responsible for establishing training needs for operations and maintenance personnel.	M. McLellan			
How are the tasks determined for which training is provided?		Generate task list based on interviews and evaluation of what people do -- a list of needs.	X	
What is the source of the learning objectives for the training?		POPs and task list define the needs.	X	
Describe the source of the continuing training requirements.		RadCon refresher Safety meetings Required reading	X	
Where does the safety authorization basis fit into the training?		Recent briefing on new ISB for operations and operations support personnel.	X	
Describe how is procedure compliance emphasized in the training?		Strong emphasis. Continued through OJT and OJT evaluation.	X	
What methods are used to improve the training program?		Revising training program materials to meet DOE 5480.20A requirements. Emphasis, money, and personnel are adequate to complete the job.	X	
9) Observe operator and maintenance personnel response to drills.	ORR Drill Off-normal exercise	Unsatisfactory. See discussion elsewhere in this report.		X
10) Evaluate a training classroom lecture or field training activity for technical and administrative adequacy.	ISB upgrade briefing presented to ORR team. 2404W Series modules briefing presented to ORR team.	ISB briefing was satisfactory. Facility mod briefing was unsatisfactory. Team feedback provided. Later tour patched the holes.	X	

Core Requirement 3.0 Level of knowledge of operations and operations support personnel is adequate based on reviews of examinations, examination results and selected interviews of operating and operations support personnel.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
References: WHC-CM-5-34, 1.8, 3.10				
1. Does training provided to operations and operations support personnel reflect ISB requirements and the addition of 2404 buildings?	Reviewed training outline and was provided the training in a session on 5/13/97 by R. Ames	The training included the necessary elements of the ISB and IOSRs.	X	
2. Does training include written or oral examinations to test personnel knowledge?	Review of training documentation	No examinations were given on the ISB and IOSR training. Facility preparations included interviews of operations, but not operations support personnel.		X
3. Is the examination material of sufficient depth to adequately test for an understanding of applicable facility/system capabilities, limitations and requirements?	No exams given	Same as above		X
4. Do examinations establish a pass/fail criteria?	No exams given	Same as above		X
5. Is the pass/fail criteria adequate?	No exams given	Same as above		X

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
6. Do oral interviews of operations and operations support personnel indicate an understanding of applicable facility/system capabilities, limitations and requirements?	Discussions with operators and CWC Team Leader on 043 and 110 procedures. Oral interviews conducted of 5 operations support personnel who had attended the ISB/IOSR training. B. Brannan E. Millikin R. Clinton P. Hemsworth G. Mickle	Level of knowledge of operations personnel was determined to be satisfactory during procedure discussions for core requirements 1 and 12. 5 of 5 personnel interviewed did not provide acceptable responses to following questions: -You attend the POD and are told the facility is in restricted mode. What does this mean? -Please explain the administrative controls established by the IOSRs. Partial answers were provided by all personnel.		X

Core Requirement 4

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.

Approach:

1. Ascertain that the authorization basis has been reviewed and approved by the proper organization based on the approval designator.

Verification of authorization basis was performed by reviewing the current ISB, HNF-SD-WM-ISB-007 and companion document HNF-SD-WM-TSR-005.

2. Review operating, maintenance, and administrative procedures to determine if the operation described is within the limits of the authorization basis and proper controls are provided to maintain those limits.

Procedures were reviewed for content and application to ascertain compliance with the authorization basis envelope. Operating procedures reviewed were SW-100-110 Receive Radioactive Solid Waste At The Central Waste Complex and SW-100-043 Inspect The Central Waste Complex and Sodium Storage Building and Associated Equipment.

3. Review selected procedures to ascertain that the requirements of the authorization basis are noted as appropriate. Procedures called out in item 2 above were reviewed for authorization basis requirements.
4. Review documentation to ascertain that requirement for worker safety as it relates to industrial, hygiene, radiological, has been established. Worker safety is incorporated into the procedures mentioned in item 2 above and programmatically implemented through management.
5. Review the configuration control program to determine if changes include an evaluation for worker safety and authorization basis impact. The configuration control program as it relates to authorization basis is implemented through the WHC-CM-5-34 Solid Waste Disposal Operations Administration Manual Section 1.24 USQ Procedure.
6. Verify a program is in place that identifies workplace hazards and the information is used both in planning the work tasks and used by operating personnel in conducting work. Programs are in place to assure hazards are identified and addressed in the performance of work for the Central Waste Complex. These include the USQ procedure WHC-CM-5-34 Section 1.24 and Shift Routines and Operating Practices Section 3.7. Radiological issues are programmatically addressed in the HSRM which

implements 10 CFR 835. Industrial Safety and Industrial Hygiene are programmatically addressed from 29 CFR 1910 and the HASP WHC-IP-1252.

Criteria:

1. The authorization basis for operation has been established, reviewed, and approved by WHC. The CWC ISB was approved by DOE in March of 1997 and fully implemented in April of 1997.
2. Systems and support system to be operated within authorization basis. Based upon review of documentation in interviews with CWC personnel operations are conducted in compliance with the approved authorization basis.
3. Documentation provides for the protection of the worker and the public. Documentation reviewed during the ORR reflects the concern and implementation of worker safety philosophy. A CPS clarity issue was identified as an observation.
4. Documentation is in accordance with applicable administrative and regulatory requirements for this type of facility. The documentation reflects the criteria for a Category 2 Nuclear Facility that performs non complex operations.
5. Program is in place to update the SAR/TSR and to evaluate impact of changes or errors to the authorization basis to the authorization basis. WHC-CM-5-34 Section 1.24 USQ procedure implements the requirement for change control mandated by DOE 5480.21.
6. A program is in place that identifies workplace hazards and the information is used in planning and conducting facility work. Several programs are implemented to identify hazards and address them in performance of work at the CWC. The Job Hazards Analysis is performed for tasks, maintenance, and work plans. The Radiation Work Permit addresses radiological hazards and the controls necessary to perform work in radiological environments. The ALARA review of work packages implements another tier of scrutiny to assure appropriate controls are addressed in the performance of work. The Joint Review Committee was developed to review hazards and concerns during high risk jobs or non-routine activities. The Crafts are empowered with a safety logbook to identify hazards and bring them to the attention of management which is required to review and address the issues brought forth. The safety council is another forum by which safety issues are addressed.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1.Criteria 1	HNF-SD-WM-ISB-007 HNF-SD-WM-TSR-005	Document is approved by DOE and the subcontractor.	YES	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
2.Criteria 2	<p>Interviews with CWC personnel: Bob Girior Manager SWO-SWBG/CWC Paul Crane Manager Operations CWC Mike Aichele CWC Team Lead Rhonda Durfee Team Lead Programs Don Zahn CWC operator Bruce Rogers CWC Lead Operator Mat Irwin Manager Engineering Randy Ames Team Lead CWC Authorization Basis</p> <p>Documents Reviewed: HNF-SD-WM-ISB-007 HNF-SD-WM-TSR-005 PROCEDURE SW-100-043 PROCEDURE SW-100-110 HNF-CD-5-34 3.7/1.24 CPS-SW-149-00002 FEB REPORT FDH-9752462</p>	<p>A weakness may exist within the criticality prevention specification relating to mitigated accident scenarios.</p> <p>SW-100-110 Section E, under caution notes relating to Flammable Acid segregation should be changed to preclude misinterpretation. Clarification of inspection aisle widths and segregation requirements according to different drivers would be helpful. (IE RCRA requirement or ISB requirement etc)</p>	YES	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
3.Criteria 3	<p>Interviews with CWC personnel: Bob Girior Manager SWO-SWBG/CWC Paul Crane Manager Operations CWC Mike Aichele CWC Team Lead Rhonda Durfee Team Lead Programs Don Zahn CWC operator Bruce Rogers CWC Lead Operator Mat Irwin Manager Engineering Randy Ames Team Lead CWC Authorization Basis</p> <p>Documents Reviewed: HNF-SD-WM-ISB-007 HNF-SD-WM-TSR-005 PROCEDURE SW-100-043 PROCEDURE SW-100-110 HNF-CD-5-34 3.7/1.24 CPS-SW-149-00002 FEB REPORT FDH-9752462 Management Self Assessment(W112)</p>	There is a high degree of awareness related to hazards and safety for the operation of the facility. There was a clarity issue identified as an observation. Their CPS complies with the intent of DOE 5480.24, however there appears to be an area that was not clarified. As part of the annual review of the AB, it is suggested that critical supporting documents be reviewed for currency also.	YES	
4.Criteria 4	<p>Documents Reviewed: HNF-SD-WM-ISB-007 HNF-SD-WM-TSR-005 PROCEDURE SW-100-043 PROCEDURE SW-100-110 HNF-CD-5-34 3.7/1.24 CPS-SW-149-00002 FEB REPORT FDH-9752462 Management Self Assessment (W112)</p>	Documentation is in place and utilized by appropriate personnel.	YES	
5.Criteria 5	<p>Document reviewed : HNF-CM-5-34 Section 1.24</p>	The USQ process is implemented through the mentioned section reviewed.	YES	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
6.Criteria 6	JHA, RWP, ALARA Review, Prejob, Safety Meetings, JRC, Safety Council	All mentioned processes contribute to an awareness of safety, hazards, and mitigation of hazards.	YES	

Core Requirement 5:

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 that monitor limiting conditions of operation or that satisfy Technical Safety Requirements. All systems are currently operable and in a satisfactory condition. The items listed below are specific prerequisites for this core requirement.

CRITERIA:

1. All safety systems and safety related process and utility systems are operable and available.
2. Operational Test Procedures have been completed and documented for all facility systems.
3. Review of completed surveillances and/or tests are conducted to ensure that acceptance criteria are met and any trends are identified.

APPROACH:

1. Review ATPs and OTPs to verify the adequacy of the administrative control program for test record retention and retrieval process, documentation for completion of testing and operational turnover. Verify that all tests were reviewed and approved by appropriate organization and departments.
2. Verify ATPs and OTPs have acceptance criteria defined, and the testing verified that they were met.
3. Review operability of: Critical systems; Compressed Air System; Fire Suppression System; Radiation Detection and Control Devices.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1. Did the test program confirm all equipment met specified acceptance criteria? (Electrical power, compressed air, fire suppression and radiation detection)	WHC-SD-W112-ATP-003, 004, 005, 006, 007 Matt Irwin confirmed vender Acceptance Test Report for equipment met ATP criteria		xx	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
2. Have test program procedures been validated?	Procedures were reviewed and validated by KEH and WHC - Matt Irwin		xx	
3. Has on-the-job training been conducted and documented during/subsequent to the test program?	Buildings and systems in W-112 are turn-key delivery. Systems are run to failure. Classroom training and an orientation walkdown of the new facilities provided. Operation is consistent with existing facilities at CWC. Larry Olsen, Training.		xx	
4. Are specific controls established for quality-affecting software identified in controlled and documented plans? CM-5-36 (4.2, 4.2)	Controls for regulating SWITS are in HNF-IP-1097		xx	
5. Have verification reviews of software documentation been performed by individuals who are independent? CM-5-36 (4.2, 4.2.2.1)	Yes, included in HNF-IP-1097		xx	
6. Have all startup test program deficiencies been corrected or evaluated as no impact on startup? (ORs, ECNs, NCRs)	No formal OTP performed. Operational tests completed and documented during initial PM		xx	
1. Has the project been officially accepted by Solid Waste?	Yes, Transmittal letter and documentation RFSH-9750257		xx	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
2. Have all open items been resolved?	Matt Irwin Sagebrush mitigation and contractor claims remain open. All building or systems item are resolved.			
3. Have incomplete items been evaluated and none impact facility start-up?	Open items are not facility or systems related.		XX	
4. Have construction drawings been turned over to Solid Waste and a controlled drawing file established?	Yes, As-built and Operating and Maintenance information on file.		XX	
5. Are there systems in place to maintain operational and modification configuration control of facility systems and components?	WHC-CM-5-34 procedure 2.1 and 2.3 Document control in MO-535.		xx	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 6 - 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.

APPROACH: 1) Review Corrective Action Plan for FEB assessment of CWC Dec. 1996.

2) Verify implementation of the CAP has effectively addressed and rectified nonconformances.

CRITERIA: A system for identifying, reviewing, cataloging, and resolving deficiencies and recommendations is adequately implemented. (5480.19, CH VI and VIII; 5700.6C, para 9.b(1)(c), 9.b.(3)(a)).

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Core Rqmt. 6 Verify implementation of the CAP to date has effectively addressed and rectified nonconformances identified in the FEB Assessment	All corrective actions identified in the Corrective Action Plan were reviewed. Those items related to the Phase V Storage Facil. were discussed with the indicated personnel.	RFSH conducted a root cause analysis of the 4 core issues to ensure that the CAP accurately and comprehensively addressed the real issues.	X	
2) FEB ASSESSMENT 2.1.2 Management/Self- Assessment	Solid Waste Management Admin. HNF-IP-0845 "Mgt. Overview Program" Solid Waste Disposal Operations Admin. WHC-CM-5-34 Self Assmt. QA - Dave Vance FM - Robert Giroir OPS - Michael Aichele OPS - Jim Mitchell OPS - Paul Crane FS - Nancie Daniel ENG - Mat Irwin	Assessments are being conducted However, The FEB identified a weakness in the implementation of the program. FDH has issued a draft Mgt. Assessment Procedure for comment. RFSH actions are in progress to revise and upgrade the assessment process and a draft procedure has been written to replace the one in WHC-CM-5-34 with a due date of 9/30/97. Surveillances of routine operations are not currently being performed by OPS - Compliance - marginal - with improvements in process.	X	
3) FEB ASSESSMENT 2.1.3 Requirements Management	S/RIDs Memorandum RFSH-9750224 Revise RFSH S/RIDS in accordance with Hanford site wide guidelines. FM - Robert Giroir FS - Nancie Daniel	As previously committed to DOE-RL and FDH the update of the RFSH S/RIDs is in progress with a forecast completion date of 7/18/97. This action is administrative. There is an approved S/RID for the current ongoing operations. The Phase V (Project W-112) addition will not introduce new work processes. The current work processes are being upgraded as indicated in the CAP. There is no physical impact to operations resulting from this corrective action.	N/A	

4) FEB ASSESSMENT 2.1.4 GOALS	<p>CAP 2.1.4.1 Develop performance indicators to clearly communicate performance goals and objectives to Solid Waste Operations empl.</p> <p>FM - Robert Giroir OPS - Paul Crane</p>	Performance indicators have been developed and posted.	X	
5) FEB ASSESSMENT 2.2.1 Operating Practices	<p>CAP 2.2.1.1 Develop a management High Risk Review Committee (HRRC) to provide additional management oversight and review for the performance of high risk and/or non-routine activities.</p> <p>FM - Robert Giroir OPS - Paul Crane FS - Nancie Daniel RC - Brad Brannon QA - Dave Vance ENG - Mat Irwin</p>	A HRRC was established and then evolved into further into a Joint Review Committee. The charter was expanded from "just" High Risk activities to also include infrequently performed work activities. All cognizant management and technical disciplines participate including QA, H&S, Rad Con, IH, and expertise from outside the organization as required. JRC-97-02 Tank Farms Tanker Grouting dated April 22, 1997 provides an example of JRC actions taken. (See procedure WHC-CM-5-34-1.19)	X	
6) FEB ASSESSMENT 2.2.1 Operating Practices	<p>2.2.1.1 Implement a program requiring weekly management surveillances. Scope to include pre-job meeting, hazard ident. & procedural consistency.</p> <p>FM - Robert Giroir QA - Dave Vance OPS - Paul Crane OPS - Jim Mitchell OPS - Mike Aichele OS - Nancie Daniel ENV - Kent McDonald</p>	Weekly surveillances are being performed. Each manager is scheduled weekly. Pat Bowmaster has schedules. While these surveillances were specifically established to be "Management Assessments" the QA representative and other support functions such as Health and Safety could team on occasion to provide more in depth coverage. This has not yet been done.	X	

<p>7) FEB ASSESSMENT 2.2.2 Communications</p>	<p>2.2.2.1 Revise the facility monthly surveillance procedures to include an operability check of all means of communication including PAX systems where appropriate. FM - Robert Giroir OPS - Paul Crane OPS - Jim Mitchell OPS - Mike Aichele QA - Dave Vance</p>	<p>PAX system is in only four of the buildings and plans are being made to remove it. Radios are considered sufficient and are supplemented by pagers and the telephone system. Implementation of the communication systems is inadequate. During the walkdown performed by Annie Aughey four out of six individuals failed to respond to their pager. Operators responded when questioned that they do not feel a need to wear a pager or turn it on since they never get paged anyway. Battery checks do not appear to be routine. There is also some controversy regarding whether or not the hand held radios can consistently pick up a signal when inside the metal buildings. Signal strength inside the buildings needs to be confirmed and consistent use of communication equipment needs to be established, communicated, and implemented.</p>	<p>X</p>	
<p>8) FEB ASSESSMENT 2.2.3 Log Keeping</p>	<p>2.2.3.1 Revise SWM Operator certification packages to include specific training on completion of surveillance and data sheets. TR - Kent McDonald OPS - Paul Crane</p>	<p>This concern has been discussed with the Operators. Operator certification packages are being upgraded as part of a general certification package upgrade and will include specific training on completion of surveillance documentation and data sheets. Completion is scheduled for 9/30/97.</p>	<p>X</p>	
<p>9) FEB ASSESSMENT 2.3.1 ALARA 2.3.2 Conduct of Radiological Operations 2.3.3 Rad Matl. & Source Control 2.3.4 Radiological Posting 2.3.5 Respiratory Protection</p>	<p>2.3.1.1 Review CM-5-34 Section 1.14 Procedures to I.D. possible improvements for planning and documentation of radiological work reqmts. Review other facilities ALARA Program procedures and implement appropriate improvements. FM - Robert Giroir OPS - Paul Crane RC - Brad Brannan RC - Dave Butler</p>	<p>A new ALARA procedure has been drafted and is scheduled to be included in the new 200 Level Operations Procedure manual in June. A work planning/Rad Screening Process has been developed and is being added to the work package planning process. B-Plant and Tank Farms ALARA programs were reviewed and document definitions were used from that program. Facility ALARA Teams have been assigned to provide coaching and mentoring of facility personnel and will be described in the new 200 Level Procedure 3.4. The Radiation Survey Task Descriptions are being revised to ensure that all rad posted facilities are established and missing/fallen signs are reported and replaced. The Joint Review Committee (JRC) was established by procedure HNF-CM-5-34-1.19 and was implemented Feb. 7, 1997. The committee will review high risk and/or non-routine work packages to determine respiratory protection requirements v.s. engineered barrier possibilities.</p>	<p>X</p>	

10) FEB ASSESSMENT 2.4.1 Engineering Processes	2.4.1.2 Review USQ program admin. record reqmt's in Engineering and assign responsibility to perform verification of USQ records. ENG - Mat Irwin OPS - Paul Crane OS - Nancie Daniel	The review of the USQ program administrative record requirements was followed by location of missing USQ screening records which are now located in a fireproof file cabinet. Karen Skelly now performs record verification on a quarterly basis in parallel with the report to DOE on USQs.	X	
11) FEB ASSESSMENT 2.4.1 Engineering Processes	2.4.1.4 Issue an approved Maint. Imp. Plan(MIP) to provide standard and sched. for completing and maint. of the Master Equip List. ENG - Mat Irwin OS - Nancie Daniel	The Maint. & Imp. Plan (MIP) has been updated and includes labeling rqrmts., drawings, & Certified Vendor Information. Robin Bushore has the assignment to maintain the Master Equip. List current and up to date. The documentation closing this corrective action is not yet complete.	X	
12) FEB ASSESSMENT 2.5.3 Performance Monitoring and Analysis	2.5.3.2 Develop program to track and tend work sched. v.s. the work completed. Status at POD OPS - Paul Crane ENG - Mat Irwin OS - Nancie Daniel	A program has been developed where Level 4s present performance indicators such as ECN status, Safety & House Keeping Insp., Monthly Safety Mtgs., Facility improvement proposals etc. at the Plan of the Day Meetings. Documentation of the program is in progress.	X	
13) FEB ASSESSMENT 2.5.4 Quality of Work Control Documentation	2.5.4.1 Revise internal work mgt procedures to strengthen rqrmts for work package documentation. QA - Dave Vance OPN - Paul Crane ENG - Mat Irwin	Internal work mgt. procedures are being revised with a current schedule for completion of 5/30/97.	X	

<p>14) FEB ASSESSMENT 2.6.1 Occupational Safety Program Implementation & Performance</p>	<p>2.6.1.1 Implement strengthened interim surveillance program while implementing procedures are being developed. 2.6.1.2 Safety personnel to participate a mentors in the FDH sponsored "pre-job Safety Briefing Mentoring " Program. FM - Rober Giroir OPN - Paul Crane QA - Dave Vance OS - Nancie Daniel</p>	<p>Interim Surveillance activities have started. However, Construction forces activities are nearly complete at the present time. Attention needs to be maintained to ensure completion of this corrective action and an ongoing program for future construction monitoring actions. The program/process is still being developed and is incomplete at this time. While this is a safety commitment the program could be strengthened by teaming with QA, Environ. Compliance, and Conduct of Opns. staff. The mentoring corrective action was closed 4/1/97 and the letter describing the program was issued to FDH April 3, 1997. There have been four mentoring sessions conducted by Gary Mickle with four more scheduled. The program will be evaluated quarterly.</p>	<p>X</p>	
<p>15) FEB ASSESSMENT 2.7.1 Training</p>	<p>2.7.1.1 Develop a comprehensive training evaluation program.</p>	<p>Performance indicators include training scheduled 60 days in advance, courses planned v.s. courses taught, TMX 98% training currency, and Occurrence Reports with training findings. A random test generation method is being developed. The Certification program upgrade for both operators and trainers is on track with all commitments scheduled for completion by 9/30/97.</p>	<p>X</p>	
<p>16) FEB ASSESSMENT 2.8.1 Emergency Preparedness</p>	<p>2.8.1.1 Sched. and perform contamination spread/spill drills FM - Robert Giroir OPS - Paul Crane TRN - Kent McDonald</p>	<p>Drills have been scheduled and are conducted once per month minimum. Drill critiques are performed and communicated. Revision of Building Emergency Plans and Hazards Assessments performance criteria are scheduled for completion 5/30/97. Drill effectiveness is still marginal and is being worked to upgrade. The procedure to ensure re-stocking of spill kits following their use is scheduled to be upgraded by 5/30/97.</p>	<p>X</p>	

17) FEB ASSESSMENT 2.10.1 QA Program	2.10.1.1 Assess the SWO QA Program implementation status to determine the extent of compliance to the criteria of 10 CFR 830.120. Revise CM-5-34 to incorporate rqmts of QAMS-004/80, Revise SAPs to include the QAMS-005/80 rqmts. Include annual QA evaluations of mgt. assessments. QA - Dave Vance QA - Don Volkman FM - Robert Giroir OPN- Paul Crane TRN- Kent McDonald	The QA Program is in review. The QAPP is being revised along with the ongoing revisions to company procedures, S/RIDS, & implementation plans. Sampling and Analysis Plans are scheduled for revision 5/30/97. The QA Program assessment is scheduled for 6/30/97 and evaluation of Mgt. Assessments is scheduled for 9/30/97. All those interviewed agree that the QA Program is adequate but that upgrades are needed to improve its effectiveness. This will be a major consideration in development of the company implementation of the soon to be issued FDH QA Program.	X
18) FEB ASSESSMENT 2.10.2 Quality Improvement 2.10.2.1 Evaluate and correct the Corrective Action Management System to bring it into full compliance with the QAPP. QA - Dave Vance FM - Robert Giroir OS - Nancie Daniel		The Corrective Action Management system upgrade and revision is in process with a completion schedule set for 7/31/97. The existing system performance is under Nancie Daniel.	X

Core Requirement 7 A systematic review of the facility's conformance to applicable DOE orders has been performed, any nonconformances have been identified, and schedules for gaining compliance have been justified in writing and formally approved.

Criteria: 1. A compliance assessment has been completed, non compliances have been identified, and schedules for gaining compliance have been made.

Approach 1 Review and assess documentation of the facility's compliance assessment.

Approach 2 Review and assess corrective action schedules

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1. Has a systematic review for compliance to applicable DOE orders been performed?	WHC-IP-1120 Rev. 4 (S/RID) Phase I and Phase II Assessment for SWD-S/RID	DOE-RL challenged Phase I. DOE approved corrective action plan to replace S/RID and Phase I assessment (97-SWT-042)	XX	
2. Has the review been documented and is it retrievable?	Same as above (1)	Same as above (1)	XX	
3. Does the assessment examine all commitments made in the S/RID?	Phase I Assessment 887700-DCD-002 Self Assessment of SWD Req.	Same as above (1)	XX	
4. Have areas of noncompliance been documented?	None identified by Phase I	Same as above (1)	XX	
5. Were the individuals who performed the assessment knowledgeable of the requirements and facility operation?	Letter DC Durban to distribution "SWD Requirement Self-Assessment 887700-DCD-001" A.E. Aughey	Expert were selected and appointed by facility management for expertise in specific functional areas.	XX	
6. Were all requirements in the SWD S/RIDs presented to a SME for compliance consideration?	AE Aughey	All requirements were reviewed by the facility SME and facility manager.	XX	
7. Was a definitive response returned on all queries?	AE Aughey	Specific responses were returned for all queries.	XX	
8. Does a compliance Review Corrective Action Schedule exist?	RFSH-9750224 Corrective Action Plan for replacing SWD-S/RID and Phase I Assessment.	S/RID due to FDH 7/18/97 Phase I due FDH 1/16/97	XX	

READINESS REVIEW **EMERGENCY MANAGEMENT** **CORE REQUIREMENT 8.1**

CORE REQUIREMENT: 8.1 There is an adequate emergency preparedness organization and program.

CRITERIA:

8.1.1 Emergency and off-normal procedures effectively guide personnel in responding to single and multiple events.

APPROACH: 1, 2

KEY:

- * 1= HNF-SD-WM-ISB-007, CWC Safety Basis.
- * 2= WHC-SD-PRP-HA-010, Solid Waste Burial Ground/Central Waste Complex Hazard Assessment.
- * 3= HNF-IP-0263-CWC, BEP for CWC.
- * 4= HNF-PR-000424, Maintaining Facility Emergency Preparedness.
- * 5= DOE-0223, Emergency Plan Implementing Procedure.
- * 6= WHC-IP-GEN, Guidance and format for Building Emergency Plans.
- * 7= WHC-IP-1018, Emergency Prep Program Plan.
- * 8= WHC-CM-5-34, 1.5 Emergency/Operational Drill Program.

CRITERIA	REFERENCE DOCUMENTS	ASSESSMENT	ACTION ITEMS
8.1.1.1 Current copies of emergency management documentation (building emergency plan; and emergency recognition and classification, protective action guidance and initial emergency response procedures) are available to the building emergency response organization. DOE 5500.3A, Section 11.d.(1)]	* 3 * 5 Charles Davis Paul Crane Bruce Rodgers Mike Aichele	Copies are located in ICP, On-Call Mgrs. Briefcase.	Meets Criteria No Action Required.

8.1.1.2 Current copies of the building emergency plan are available to the building occupants for their review. [HNF-PR-000424]	* 3 Charles Davis Bruce Rodgers Paul Crane	Copies are located in ICP, On-Call Mgrs. Briefcase.	Meets Criteria No Action Required.
8.1.1.3 The current copy of the facility-specific "Recognition and Classification of Emergencies" procedure is available for use by emergency response personnel. [DOE 5500.3A, Section 11.c.(3); Best Management Practice] Note: Although the Site Emergency Preparedness organization is responsible for the issuance of the facility-specific "Recognition and Classification of Emergencies" procedure, the facility is responsible for ensuring that the procedure is implemented during emergency events.	* 5 Paul Crane Charles Davis Mike Aichele	Copies located with on-call managers briefcase and the Incident Command Post.	Meets Criteria No Action Required.

8.1.1.4 The current copy of the area-specific "Initial Response for Declared Emergencies" procedures is available for use by emergency response personnel. [DOE/RL-94-02; Best Management Practice] Note: Although the Site Emergency Preparedness organization is responsible for the issuance of the area-specific "Initial Response for Declared Emergencies" procedure, the facility is responsible for ensuring that the procedure is implemented during emergency events.	* 5 Paul Crane Charles Davis Mike Aichele	Copies located with on-call managers briefcase and the Incident Command Post.	Meets Criteria No Action Required.
8.1.1.5 Provisions and procedures are in place for facility evacuation. [DOE 5500.3A, Section 11.c.(6)(c); DOE/RL-94-02]	* 3 * 5 Charles Davis	Stated in BEP. Evacuation sirens are in place for outside of building; inside is by Radio contact or runners or pager.	Site evacuation sirens are not stated in BEP. Radio contact in some areas are poor due to weak signal. Findings in LOI 8.1.4.1
8.1.1.6 A system for personnel accountability is in place. [DOE 5500.3A, Section 11.c.(6)(c); DOE/RL-94-02]	* 3 * 5 Charles Davis	Stated in BEP, staging areas posted, drills performed.	Meets Criteria.

<p>8.1.1.7 Primary and alternate staging areas have been identified for the facility.</p>	<p>* 4 Charles Davis</p>	<p>Stated in BEP, signs at staging area. Observation: The alternate staging area or site evacuation siren are not mentioned in the facility orientation.</p>	<p>Meets Criteria. Place the alternate staging area location and site evacuation sirens in facility orientation. Note: Signs to direct to staging area in outer areas. Good Practice.</p>
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CRITERIA:

8.1.2 An approved emergency plan and supporting documents exist and have been tested to ensure effective emergency preparedness and response. Provisions are in place to upgrade the Emergency Plan based on lessons learned from drills, exercises and actual emergencies. The emergency plan incorporates required emergency preparedness program features.

APPROACH: 2, 3, 4, 7

CRITERIA	REFERENCE DOCUMENTS	ASSESSMENT	ACTION ITEMS
8.1.2.1 The building emergency plan is based on facility-specific safety analyses of potential abnormal conditions and covers the range of credible emergencies. [DOE 5500.3A, Section 11.b.(1); DOE/RL-94-02]	* 1 * 3 * 5 * 2 Les Sutton Charles Davis	Current Hazards Assessment does not reflect ISB event scenario and consequences (example, Mixed Waste drum fire Beryllium Concentrations).	Revise Emergency Plans, Hazards Assessment and Emergency Action Levels to reflect ISB content as appropriate. As referenced in LOI finding 8.1.6.1.
8.1.2.2 The building emergency plan is updated or verified at least annually. [DOE 5500.3A, Section 11.c.(13)(b); DOE/RL-94-02]	* 3 * 4 Charles Davis Mike Aichele	Emergency plan revised and updated annually. Current copy date 1/8/97, procedure states on page one that it will be updated annually.	Meets Criteria No Action Required.
8.1.2.3 The building emergency plan is approved by Site Emergency Management, Hanford Fire Department, and the building emergency director. [DOE/RL-94-02]	* 3 * 4 Charles Davis Mike Aichele	Approved verified per HNF-IP-0263-CWC. The Plan is reviewed by plant personnel for technical content and lessons learned from drills.	Meets Criteria No Action Required.

8.1.2.4 There is a distribution and control system which assures that all copies of the building emergency plan is kept current. [DOE 5500.3A, Section 11.c.(13)(b); DOE/RL-94-02]	* 3 * 4 Charles Davis Mike Aichele	Copies are controlled through Company Internal publication process.	Meets Criteria No Action Required.
8.1.2.5 An electronic copy of the approved building emergency plan is sent to Site Emergency Management for publication on the Hanford Local Area Network (HLAN).	* 3 * 4 Charles Davis Mike Aichele	The Emergency Plan is currently on HLAN.	Meets Criteria No Action Required.

CRITERIA:

8.1.3 Facility Emergency Response personnel are trained to effectively respond and mitigate the consequences of emergencies (assessed under Core Requirement 2 and 3, provided here for information and completeness). Facility non-emergency response personnel are adequately trained on emergencies situations (assessed under Core Requirement 2 and 3, provided here for information and completeness). Non-facility emergency response personnel are trained to respond to and support CWC. NOTE: only training that is unique to CWC or describes CWC's operations is to be assessed.

APPROACH: 5, 9

CRITERIA	REFERENCE DOCUMENTS	ASSESSMENT	ACTION ITEMS
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<p>8.1.3.1 A program is established for the initial and ongoing training of emergency response personnel appointed by the building emergency director. [DOE 5500.3A, Section 11.c.(11)(b); DOE/RL-94-02] NOTE: The Site Emergency Management organization is responsible for establishing and maintaining the building emergency director and bomb search team training program.</p>	<p>* 3 * 4 Charles Davis Mike Aichele Mary McLellan Marvene McChesney</p>	<p>BED trained by site EP. BEO trained by SWM Training Package. Accountability Aides, Building Sweeps trained by SWM training.</p>	<p>Meets Criteria.</p>
<p>8.1.3.2 All members of the building emergency response organization receive initial training before participation. Skill levels and skills that must be demonstrated are identified, completed, and documented prior to assignment to perform the task independently. [DOE 5500.3A, Section 11.c.(11)(b); DOE/RL-94-02] NOTE: Course #02028B for initial building emergency director training; course #037510.</p>	<p>* 3 * 4 Charles Davis Mike Aichele Mary McLennan Marvene McChesney</p>	<p>Training performed before personnel are assigned to position.</p>	<p>Good Practice. Accountability aides perform a drill at end of class. Meets Criteria.</p>

8.1.3.3 All members of the building emergency response organization participate in continuing training on at least an annual basis. [DOE 5500.3A, Section 11.c(12)(d); DOE/RL-94-02]	* 3 * 4 Charles Davis Mike Aichele Mary McLennan Marvene McChesney	Personnel are trained per # 037510 (BED training), 301740 (Haz. Comm. Trng) and 301750 (event command post trng.)	Meets Criteria.
8.1.3.4 Training records for each individual appointed by the building emergency director are maintained per requirements of the training program. [DOE 5500.3A, Section 11.c.(11)(b)] NOTE: The Site Emergency Management organization is responsible for submitting the building emergency director and bomb search team training records.	* 3 * 4 Charles Davis Mike Aichele Mary McLennan Marvene McChesney	Lesson Plans, Course Completion Rosters, TMX referenced, no abnormalities noted.	Meets Criteria.
8.1.3.5 The facility personnel have reviewed the building emergency plan within 30 days after assignment to the building and annually thereafter.	* 3 * 4 Charles Davis Mike Aichele Mary McLennan Marvene McChesney	Personnel annually review plan as per Hazards Communication Class # 301740.	Meets Criteria.
8.1.3.6 Facility personnel completing a review of the building emergency plan is documented on the Facility Emergency and Hazard Information Checklist and forwarded to the contractor training records program.	* 3 * 4 Charles Davis Mike Aichele Mary McLennan Marvene McChesney	Exempt from Checklist use Hazards Communication Class # 301740.	Meets Criteria.

CRITERIA:

8.1.4 Facilities, equipment, and resources are in place and adequate to support emergency response operations and ensure the protection of all personnel (e.g., Emergency Operations Center, backup or alternative facilities, primary and backup communication, alarm adequate to notify personnel, transportation, medical treatment, respiratory equipment, exposure controls, instrumentation to measure exposure, etc).

APPROACH: 5

CRITERIA	REFERENCE DOCUMENTS	ASSESSMENT	ACTION ITEMS
8.1.4.1 Alarms notify all affected personnel of emergencies. Plant announcing systems ensure full coverage of the facility. [29CFR1910 Part 165(b)(1)]	* 3 Charles Davis	Site wide sirens ensure adequate coverage. Personnel inside facility are also covered by two-way radio and pager.	Two-way radio signals are weak or non existent in some areas. Suggest upgrade to two-way radio system.
8.1.4.2 Preventative maintenance is performed on evacuation/take cover alarms by the responsible maintenance organization in accordance with established preventative maintenance procedures. [DOE 5500.3A, Section 11.c.(10)(d)]	* 3 Charles Davis Mike Aichele	Site wide sirens are audibly tested monthly and electronically tested weekly as per Statement of Work, Maintenance and Monitoring of the Hanford Site Emergency Alerting System.	Meets Criteria.

<p>8.1.4.3 Evacuation/take cover alarms are audibly tested at a predesignated time each month. This requirement is incorporated into preventative maintenance programs. [DOE 5500.3A, Section 11.c(10)(d)]</p>	<p>* 3 Charles Davis Mike Aichele</p>	<p>Site wide sirens are audibly tested monthly and electronically tested weekly as per Statement of Work, Maintenance and Monitoring of the Hanford Site Emergency Alerting System.</p>	<p>Meets Criteria.</p>
<p>8.1.4.4 Emergency equipment, as identified in the respective building emergency plan, is inventoried, tested, and serviced on a periodic basis. Inventories and tests are documented (and posted where applicable). [DOE 5500.3A, Section 11.c.(10)(d)]</p>	<p>* 3 Charles Davis Mike Aichele</p>	<p>The Emergency Plan does not give specific locations of emergency equipment.</p> <p>Spill control kits are locked with wire ties which cannot be broken without tools. Should be able to break and open by hand.</p> <p>Not all spill kits have inventory sheets in cabinets.</p> <p>Radiological posting signs are outdated.</p>	<p>Give specific locations of emergency equipment in Emergency Plan.</p> <p>Replace wire ties with break away ties.</p> <p>Replace missing inventory sheets.</p> <p>Replace Rad. signs with current site wide approved signs.</p>

8.1.4.5 The building emergency director has ensured that vehicles are available to move all personnel from the facility. This may be accomplished by a combination of government-owned and private vehicles. [DOE/RL-94-02]	* 3 Paul Crane Charles Davis Mike Aichele	Staging Area Manager requires personnel at staging area to account for keys and number of personnel per vehicle.	Meets Criteria.
8.1.4.6 Utility disconnects identified in the building emergency plan are properly labeled in the building. [Best Management Practice]	* 3 Paul Crane Charles Davis Mike Aichele	Utility disconnects are stated in BEP for location. There are no disconnect ID numbers stated.	Revise Emergency Plan or Guide to list specific ID numbers for electrical disconnects.

CRITERIA:

8.1.5 Provisions and procedures are in place to support correct classification of emergencies, assessment of consequences, notification of emergency response personnel, and to recommend appropriate protective actions.

APPROACH: 8

CRITERIA	REFERENCE DOCUMENTS	ASSESSMENT	ACTION ITEMS
8.1.5.1 The current copy of the facility-specific "Recognition and Classification of Emergencies" procedure is available for use by emergency response personnel. [DOE 5500.3A, Section 11.c.(3); DOE/RL-94-02; Best Management Practice] Note: Although the Site Emergency Preparedness organization is responsible for the issuance of the facility-specific "Recognition and Classification of Emergencies" procedure, the facility is responsible for ensuring that the procedure is implemented during emergency events.	* 3 * 5 Paul Crane Mike Aichele Charles Davis	Copies are located at the ICP and on-call Mgrs. Briefcase.	Meets Criteria.

CRITERIA:

8.1.6 Hazard assessment are prepared, documented, and maintained which considers emergency events that could affect CWC.

APPROACH: 6, 8

CRITERIA	REFERENCE DOCUMENTS	ASSESSMENT	ACTION ITEMS
8.1.6.1 The building emergency plan is based on facility-specific safety analyses of potential abnormal conditions and covers the range of credible emergencies. [DOE 5500.3A, Section 11.b.(1); DOE/RL-94-02]	* 1 * 2 * 3 * 5 Charles Davis	Current Hazards Assessment does not reflect ISB event scenario and consequences (example, Mixed Waste drum fire Beryllium Concentrations).	Revise Emergency Plans, Hazards Assessment and Emergency Action Levels to reflect ISB content as appropriate.

<p>8.1.6.2 The current copy of the facility-specific "Recognition and Classification of Emergencies" procedure is available for use by emergency response personnel. [DOE 5500.3A, Section 11.c.(3); Best Management Practice] Note: Although the Site Emergency Preparedness organization is responsible for the issuance of the facility-specific "Recognition and Classification of Emergencies" procedure, the facility is responsible for ensuring that the procedure is implemented during emergency events.</p>	<p>* 1 * 2 * 3 * 5</p> <p>Charles Davis Mike Aichele</p>	<p>The current Emergency Action Levels reflect the Hazards Assessment current revisions.</p> <p>The EAL's are available to BEO personnel at the ICP and the on-call manager.</p>	<p>Meets Criteria.</p>
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CRITERIA:

8.1.7 Individuals and alternates are designated to perform all emergency roles using clear lines of succession.

APPROACH: 10, 1

CRITERIA	REFERENCE DOCUMENTS	ASSESSMENT	ACTION ITEMS
8.1.7.1 Individuals and alternates are designated to perform all emergency roles. [DOE 5500.3A, Section 11.c.1]	* 3 * 4 Mike Aichele Charles Davis	The Solid Waste Management Authorization Listing of Emergency Personnel designates Building Emergency Organization Personnel.	Meets Criteria No Action Required.
8.1.7.2 Responsibilities for each person in the building emergency response organization are well defined. [DOE 5500.3A, Section 11.c.1]	* 3 Mike Aichele Charles Davis	Responsibilities are defined in the BEP sections 3.1, 3.2. More specific definitions are in the upcoming Building Emergency Response Guide.	Implement Building Emergency Response Guide or more specific information in plan..

8.1.7.3 Building emergency response organization personnel selection is based on assignments similar to normal day to day responsibilities and the individual's ability to properly analyze data, assess situations, and make decisions under high stress conditions. [DOE 5500.3A, Section 11.c.1]	* 3 Mike Aichele Charles Davis	Job assignments were considered when selecting emergency organization members. BED is Operations Team Leads.	Meets Criteria No Action Required.
8.1.7.4 Additional support personnel such as Health Physics, Maintenance, Engineering, or Hazardous Material Coordinators have been identified as a part of the building emergency response organization as needed.	* 3 Mike Aichele Charles Davis Paul Crane	Support Personnel are identified in the Authorization Listing of Emergency Personnel for Solid Waste Management.	Meets Criteria No Action Required.
8.1.7.5 A listing of the complete building emergency response organization including positions, names, work locations, and telephone numbers is maintained separate from the building emergency plan in an internally controlled facility document.	* 3 * 4 Mike Aichele Charles Davis Paul Crane	The Authorization Listing of Emergency Personnel for Solid Waste Management is maintained separately from emergency plan and controlled internally.	Meets Criteria No Action Required.
8.1.7.6 Copies of the complete building emergency response organization listing are issued, at a minimum, to appropriate facility location and to Site Emergency Management.	* 3 * 4 Charles Davis	Copies are kept at the Incident Command Post, Briefcase, EOC, Site Emergency Procedures.	Meets Criteria No Action Required.

Approach:

1. Interview individuals responsible for implementation of the emergency preparedness program. Ensure that the emergency preparedness program includes the necessary elements of staffing, management support, resources, training, and planning, to cope with emergencies.
2. Review procedures (operations, maintenance, surveillance, RADCON, administrative, etc.) to verify that emergency and off-normal event are sufficiently linked to the emergency plan. Through discussions with operations personnel and facility managers, confirm knowledge of emergency/off-normal operating procedures. During conduct of the ORR evaluate how personnel utilize procedures during event drills.
3. Review the Emergency Plan and supporting documentation and compare to the requirements of the FSAR, Health and Safety Plan (HASp), Hazards Baseline Assessment, TSR, and CSER. Ensure that provisions are in place to incorporate drills and actual emergency lessons learned into the Emergency Plan.
4. Review procedures and training material for non-facility emergency response personnel (e.g., fire department, ambulance, hazmat team, security, etc.) to assure CWC has been included, noting it's unique processes.
5. Review the Emergency Plan for commitment and definition of facility, equipment, and resources for emergency response. Conduct a site walk through to ensure medical, fire, hazmat, radiological response, and monitoring equipment are in place. Review surveillance procedures for emergency response equipment to ensure their continued maintenance and ensure up-to-date contact names and telephone numbers are provided at all times.
6. Interview personnel responsible for classification of emergencies to determine if the classification scheme is consistent with operating procedures and technical specifications.
7. Perform walk down of facilities and equipment, review procedures and interview appropriate onsite and, as necessary, offsite personnel to verify that provisions are adequate and in place for transportation and treatment of contaminated/injured personnel, fire/rescue support, and protection of security personnel during emergencies.
8. Review Hazard Analysis for CWC to ensure a comprehensive hazard assessment has been conducted and that the emergency plan is responsive to the full spectrum of accidents.
9. Review procedures (operations, maintenance, surveillance, RADCON, administrative, etc.) to verify that emergency and off-normal event are sufficiently linked to the emergency plan. Through discussions with operators and operations managers, confirm operator knowledge of emergency/off-normal operating procedures. During conduct of the ORR evaluate how personnel utilize procedures during event drills.
10. Ensure up-to-date contact names and telephone numbers are provided at all times.

Core Requirement 8.2 There is an adequate engineering support organization and program including the cognizant/system engineer approach.

Criteria: 7. Procedure and controls that ensure safe and reliable operations are adequately employed in conduct of engineering activities.

8. Standard engineering practices, principles, convention and approaches are employed.

Approach: 1. Obtain and review programs, processes, and procedures which control engineering work and confirm appropriate checks and balances exist which would preclude or correct errors (e.g., design, procedure, etc.), standard engineering practices and approaches are employed.

2. Interview engineering support personnel to confirm their understanding of governing and applicable programs/procedures. Include confirming their knowledge of applying these programs and procedures.

3. Through discussion with maintenance, operation and management, develop an understanding of the adequacy of engineering. Determine if responsibility for completing work is clearly defined.

LINE OF INQUIRY	EVIDENCE EXAMINED	COMMENTS	F OR O ?
Are areas of responsibility identified within engineering?	Mat Irwin, Manager Staff Knowledge Checklist Technical Baseline Description	All cog. engineers are required to complete a staff knowledge checklist. Checklist is generic to SWM as apposed to area specific, LLBG or CWC.	none
Are areas of responsibility identified within engineering?	Robin Bushore, Engineer Staff Knowledge checklist required reading/mgr signoff Technical Baseline Description	Same as above	none

LINE OF INQUIRY	EVIDENCE EXAMINED	COMMENTS	F OR O ?
Evaluate adequacy of Engineering Support.	Paul Hemsworth, Maintenance	Paul's response was that engineering support and response to maintenance for all aspect of project 112 was excellent	none
Are standard engineering practices/conventions/approaches used.	Mat Irwin WHC-CM-6-1	CM-6-1 is the guiding document for engineering procedures at SWM. National standard ANSI, NFPA, and NEC are used as necessary.	none
Are standard engineering practices/conventions/approaches used.	Robin Bushore Technical Baseline Description WHC-CM-6-1	The Technical baseline establishes history and reference source documentation of current and future projects in SWM. WHC-CM-6-1 is the guiding document for engineering procedures at SWM. National standard ANSI, NFPA, and NEC are used as necessary.	none

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 1:

Environmental Compliance programs are defined in formal policies, standards, and procedures.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>1, S/RID 20.1) Is Phase V operational scope completely described in the CWC/SWD program & facility operating procedures?</p> <p>* Are the increases in the safety envelope and environmental compliance limits separately evaluated and not considered as incremental increases of a continued action [40 CFR 1508.25]?</p>	<p>Interviews with:</p> <p>Kent McDonald Brett Barnes Larry Olsen Bob Giroir</p> <p>Read Interim Safety Basis document (IP-1120) & Solid Waste Technical Baseline (SD-WM-RPT-060</p>	<p>Phase V scope defined in terms of general CWC strategic plan of operation and tech baseline. Buildings 2404-WA, WB, WC will be operated to same standards as rest of CWC storage.</p> <p>Inventory & Drum limits defined in the ISB. Earlier Phases of storage were operating under pre-ISB control (FSAR). Now all units to be administered under the ISB.</p>	<p>X</p> <p>X</p>	
<p>1a, S/RID 20.1) Is the proposed Phase V operational scope due to a legislative agreement or court order (eg, TPA)?</p> <p>* If so, is this requirement noted in the facility operations program? [WAC 197-11 & 352-11]</p>	<p>Kent McDonald Brett Barnes Larry Olsen Bob Giroir</p> <p>Referred to Strategic Plan & Technical Baseline document</p>	<p>Not a court order issue.</p> <p>The new SWD contract rewards management for reaching final waste disposal, not storage. Facility operating policy will be to output wastes as efficiently as possible to final disposal.</p>		n/a

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>1b) Has the Phase V scope of operation been evaluated for impacts on the safety basis (ISB)?</p> <p>* Verify that CWC/SWD Environmental Compliance has reviewed Phase V operating procedures, and determined that they are complete and compliant with the Interim Safety Basis document.</p>	<p>Kent McDonald Brett Barnes Larry Olsen Bob Giroir</p> <p>Examine ISB & CWC EC Regulatory File Index</p>	<p>Upgraded safety requirements given compliance reviews by CWC EC staff; verified that they do not conflict.</p> <p>CWC EC reviews all new facility operating procedures (POPs), and revisions if the cog engineer requires it.</p>	<p>X</p> <p>X</p>	
<p>1c, S/RID 20.3) Is a groundwater monitoring protocol in place to monitor possible contamination release from Phase V, or from trenches which may provide wastes received by Phase V? [WAC 173-303-645]?</p> <p>* Is the protocol sufficiently sensitive to detect potential Phase V releases to the soil under off-normal operating conditions?</p> <p>* Has the CWC/SWD monitoring program been evaluated for sufficiency in the past 3 years?</p> <p>* Have all CWC/SWD waste program deficiencies been included on the Hanford Action Tracking system for closure?</p>	<p>B. Barnes L. Olsen</p> <p>Examine Site-wide EC Manual (CM-7-5) and WAC 173 sections.</p>	<p>Groundwater monitoring is not done by CWC as an individual action. Reliance on the overall GW program under PNNL control for the entire Hanford Site.</p> <p>This requirement is under review for next version of the S/RID.</p> <p>Impact potential is negligible per CWC. No GW violations have been reported by PNNL.</p> <p>See Observation 0.8.3.1.1</p>		<p>X</p>

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

1d, S/RID 20.3) Is a procedure in place to evaluate the CWC potential impact on ground water contaminant transport as part of the Hanford site-wide RCRA program? [WAC 173-303-645]	K. McDonald B. Barnes	Does not apply specifically to CWC.		n/a
1e, S/RID 20.3) Is a procedure in place to estimate potential radioactive dose to the maximum individual (on-site and off-site), as a result of Phase V operations? [WAC 173-480-70]	B. Barnes	Not part of CWC EC program. Responsibility given to Radiation Protection. Insufficient time available to verify this issue.		n/a
1f, S/RID 20.6) Is a procedure in place to evaluate if wastes to be received at Phase V can be excluded from reporting requirements under "de minimus" rules? Are sufficient personnel trained to implement similar procedures at other CWC/SWD facilities? [40 CFR 372.38]	K. McDonald B. Barnes L. Olsen	Waste containers packaged by others, containers must meet Waste Acceptance Criteria (EP-0063-4). Insufficient time to verify this issue outside of CWC.		n/a
1g, S/RID 20.6) Is a procedure in place for Phase V record keeping? * Are compliance implementation records maintained and readily retrievable within CWC? * Are sufficient personnel trained to enable effective implementation? [40 CFR 377.10]	K. McDonald B. Barnes M. McChesney L. Olsen J. Skolrud J. Winterhalder	Records are scattered throughout the CWC and sometimes the entire Hanford Site. Record retention guidelines followed in RIDS. Data for compliance reporting verified/ validated by source cog personnel before publication. Environmental records indexed in CWC EC files. This topic reviewed by other ORR team members, also.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>1h, S/RID 20.6) Is a procedure in place for recording (in facility logs) all actions taken to manage received waste at Phase V?</p> <p>* Are similar procedures implemented at other CWC/SWD facilities? [WAC 173-303-380]</p>	<p>B. Giroir R. Irwin (Mat) B. Barnes Drill Participants</p> <p>Examine EC facility inspection checklist of 3/28/97.</p>	<p>Facility logs being kept.</p> <p>Drill log (chronology) praised in critique.</p> <p>EC facility inspection checklists well utilized.</p> <p>Insufficient time available to verify effectiveness of drum tracking in the SWITS.</p>	<p>X</p>	<p>TBD</p>
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PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 2:

A plan for monitoring air-effluent sources has been formalized in a document and has received appropriate review and approval.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
2) Verify that the waste program has been suitably reviewed to meet the specific air emission requirements of Phase V operation.	K. McDonald B. Barnes L. Olsen J. Luke B. Curn CWC/EC Files Central ES Files	Requirements for Phase V developed before many of current CWC staff were involved. Some reviews and interfacing with State regulators done by central Environmental Services organization. CWC EC files contain evidence that program requirements were met.	X	
2a) Verify that the air-emission sources from Phase V have been evaluated for potential to emit, and that applicable ALARA requirements are incorporated in facility design. * Was supporting data submitted for state review under new air source emissions and Toxic Air Pollutants? [WAC 173-400-110 & WAC 173-400-30]	K. McDonald B. Barnes L. Olsen J. Luke B. Curn CWC/EC Files Central ES Files Notice of Construction	A formal NOC (RL-95-79) was submitted to the State on Aug 29, 1995. It was developed as a cooperative effort between Solid Waste, and central ES staff. It contained all necessary estimates of air emissions data based on the facility design studies.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>2b, S/RID 20.2) As a new emission source, was the facility design subjected to a Best Available Radioactive Control Technology (BARCT) review?</p> <p>* Is any active control method implemented in the Phase V building(s) other than HEPA filtration?</p> <p>* Was a new source review made in support of the Air Operation Permit application to the State regulators [WAC 173-400-110]?</p>	<p>K. McDonald</p> <p>CWC/EC Files Central ES Files</p> <p>NEPA/Environmental Assessment NOC</p>	<p>Potential scope and impacts were collected, evaluated and presented in an environmental Assessment for compliance to NEPA requirements (DOE/EA-0891, Sept 1995).</p> <p>The project construction would not have been allowed to proceed, per project management requirements, until the BARCT studies had been completed, and incorporated.</p> <p>The question of a new-source review has been identified in a pre-ORR assessment and is identified as a Pre-Start Action for the CWC/EC organization, prior to accepting wastes into the Phase V buildings.</p>	<p>X</p>	<p>TBD</p>
<p>2b, S/RID 20.1) Was a Notice of Construction and/or other communication prepared and submitted to the State regulatory agencies, with estimates of environmental aspects of proposed Phase V operational workslope? [WAC 197-11-960]</p>	<p>NOC examined</p>	<p>See above response.</p> <p>Insufficient time was available to verify content of past reviews. The FEB assessment found no deficiencies in the program basis.</p>	<p>X</p>	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>2b, S/RID 20.1) Were any engineered barriers required in the design to enable Phase V to meet NEPA/SEPA compliance (per ROD/FONSI or State DNS)?</p> <p>* If so, were the designs reviewed by the applicable external engineering oversight authority [WAC 352-11 et seq]?</p>	<p>NOC examined</p>	<p>Insufficient time was available to verify project construction files, for certification of background studies. No objections were made by the State regulators to prevent operation of Phase V facilities.</p>	<p>X</p>	
<p>2c, S/RID 20.2) Is the Phase V facility required to register with the State as a new air emissions source under WAC 173-401 for Toxic Air Pollutants, etc?</p> <p>* If so, is documentation of registration maintained in the CWC/SWD program records, as well as supporting "potential to emit" estimates for normal operational scope [WAC 173-400-141 & -171]?</p>	<p>K. McDonald B. Barnes</p>	<p>This issue on CWC/EC Action list, per pre-ORR assessment.</p> <p>An observation, 0.8.3.2.1, is submitted on this area.</p>		<p>TBD</p>

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>2d, S/RID 20.2) Are Phase V operating procedures in place to prevent air emissions or waste inventories from exceeding approved design and operating permit limits?</p> <p>* Are sufficient numbers of facility workers trained to these procedures?</p> <p>* Are similar procedures being implemented effectively at other CWC/SWD facilities? [WAC 173-216-110 et seq]</p>	<p>K. McDonald B. Barnes L. Olsen B. Giroir J Skolrud</p> <p>Examined list of POPs from HLAN, SWMPROC directory.</p> <p>Hanford Site 1995 Environmental Report</p>	<p>All CWC storage buildings operate under the same procedures and administrative controls for air emissions requirements.</p> <p>CWC operations personnel are trained to same (safety) basis criteria for all 24XX-series buildings. Buildings are not required to perform continuous emissions monitoring. A record sampler is maintained for the annual environmental report.</p>	<p>X</p>	
<p>2e, S/RID 20.4) Has an evaluation of Phase V operational scope been performed to determine need to comply with 40 CFR 61 registration and monitoring of air emissions?</p> <p>* Will the CWC meet threshold requirement of less than 10 millirem/year (beta-gamma) dose to the general public?</p> <p>* Will the CWC meet threshold requirement of less than 25 millirem/year (TRU-alpha) dose to general public? [40 CFR 61.92 & 191.03]</p>	<p>K. McDonald B. Barnes L. Olsen</p>	<p>Operational scope reviewed, per criteria responses above.</p> <p>Procedures to evaluate expected dose are outside the CWC/EC responsibility. Referred to the Rad Con organization. Time not available to verify this issue further.</p> <p>Data to support the estimates is backed up for the Hanford Site Environmental Report, published by PNNL, (latest year 1995, issued Sept 1996).</p>	<p>X</p>	<p>TBD</p>

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>2f, S/RID 20.4) Has the Phase V scope of operations been documented as meeting ALARA (radioactive emissions) for facility workers? [WAC 402-10-010]</p>	<p>K. McDonald B. Barnes L. Olsen</p>	<p>CWC/EC provides personnel to attend and participate in ALARA meetings, lessons learned, safety briefings, pre-job reviews and drill critiques. A separate ALARA plan is not used.</p>	<p>X</p>	
<p>2g) Review goals, procedures, roles & responsibilities, training/certifications and implementing records for air emission compliance at similar CWC/SWD facilities.</p> <p>* Coordinate responses and supporting data with ORR lead reviewer for training.</p>	<p>B. Giroir K. McDonald</p>	<p>Solid Waste Division maintains a Strategic Plan and Technical Baseline for forward planning. The EC organization interfaces with other SWD facilities and other organizations as need and opportunity requires. Staff are provided cross-training and other skills upgrade assistance on a case-by-case basis.</p> <p>Sufficient time was not available to verify details of in these outside organizations.</p>	<p>X</p>	<p>TBD</p>

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 3:

A formal waste program exists, which includes goals, procedures, roles and responsibilities for identifying, characterizing, and managing all waste streams.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
3) Verify that a formal waste program is documented, including goals, procedures, roles, training and responsibilities for identifying, characterizing, and managing all waste streams within the scope of the CWC Interim Safety Basis document.	K. McDonald B. Giroir R. Irwin B. Barnes L. Olsen J. Winterhalder Strategic Plan/ Technical Baseline ISB POPs	Policy, goals, procedures, training, inspections, assessments, critiques all being followed regularly by the CWC. Roles and responsibilities are not uniformly assigned within CWC, but when outside assistance/expertise is needed requests can be made to other SWD and RUST organizations. Charters of the separate RUST organizations are being reviewed in order to optimize staff effectiveness. This is a good management practice, and not the result of an outside requirement.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

3a) Verify that similar procedures, and training are being effectively implemented for other, similar CWC/SWD facilities.	See above.	The FEB evaluation (Dec 1996) shows no non-compliance issues in the environmental protection program. A finding is submitted for improvement of non-radioactive hazards emphasis, as a result of the ORR critique of the emergency drill.		TBD
3b, S/RID 20.2) Is a complete list of expected input waste streams (including designations) posted in the Phase V facility for reference by facility workers and external oversight personnel? * Is documentation incorporated in the Phase V portion of the CWC/SWD Interim Safety Basis?	K. McDonald B. Barnes L. Olsen	Buildings do not list input waste streams in this manner. The SWITS and facility logs provide the nearest equivalent information. See Observation 0. 8.3.2.2		X
3c, S/RID 20.2) Will an up-to-date and comprehensive inventory of stored waste(s) be maintained at the Phase V facility? * Is the composition data for individual waste containers readily available to facility and oversight personnel, at similar CWC/SWD facilities?	K. McDonald B. Barnes L. Olsen B. Giroir	See above comment. Implementation of this requirement represents a best management practice under "conduct of Ops." See observation 0. 8.3.2.2		X

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>3d, S/RID 20.3) Is a procedure in place to maintain a log of inspection for the Phase V stored wastes?</p> <p>* Are suitable numbers of CWC/SWD personnel trained to these procedures to operate Phase V?</p> <p>* Are similar procedures effectively utilized at other CWC/SWD facilities?</p>	<p>K. McDonald B. Barnes L. Olsen</p> <p>Examine POPs index Selected POPs CWC/EC Training file</p>	<p>CWC EC staff are suitably trained; an EJTA has just been completed in evaluation of changes/upgrades to the required training. CWC EC staff follow approved procedures for doing facility inspections.</p> <p>Insufficient time was available to verify non-EC use of facility log upkeep. Drill critique did not indicated that facility log was consulted during the drill accident for drum waste contents.</p>	<p>X</p>	<p>TBD</p>
<p>3e, S/RID 20.4) Is a procedure in place to ensure that Phase V scope of operations will meet threshold levels (maximum contaminant levels) for all other hazardous chemicals, specified by the Environmental Protection Agency and the state Board of Health? [WAC 246-290-310]</p>	<p>B. Barnes L. Olsen</p> <p>Examined Hazards Communication Program Plan (IP-0845, section 1.8)</p>	<p>A search of the POPs index did not show that this issue was directly being met. Emergence drill critique indicated this is a problem area.</p> <p>A finding is submitted which includes this issue as part of the overall hazards awareness actions.</p>	<p>X</p>	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>3f, S/RID 20.6) Are labeling requirements for Phase V wastes being suitably implemented at other similar CWC/SWD facilities?</p> <p>* Are Phase V designation/segregation requirements being implemented at other CWC buildings? [40 CFR 377.10]</p>	<p>K. McDonald B. Barnes L. Olsen S. Adelman</p> <p>Examine EC Inspection Checklist from 3/28/97 Solid Waste Acceptance Criteria (EP-0063-4)</p>	<p>Most CWC EC personnel participate in the facility walk-down inspections. Drum labels are one of the items verified.</p> <p>The generator is responsible for proper labels on containers. CWC may do selected verification and sampling on an as-needed basis. Sampling for verification of drum contents is outside the scope of the CWC/EC responsibility, as long as the waste is certified by its generator as meeting the SW acceptance criteria. Insufficient time was available to verify this issue outside of CWC Phase V.</p>	<p>X</p>	<p>n/a</p>
<p>3g, S/RID 20.4) Is a procedure in place to limit fugitive emissions (PM-10) from waste trenches, which may supply waste to the Phase V facility? [WAC 173-400-040]</p> <p>* Is the procedure being effectively implemented for other CWC/SWD facility receipt operations?</p>	<p>B. Barnes L. Olsen</p> <p>WAC sections EC manual (CM-7-5)</p>	<p>Trenches inspected and stabilized on an as-needed basis, annually as a minimum.</p>	<p>X</p>	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION-4:

There is a formal Pollution/Waste Minimization Plan.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
4) Verify that a pollution prevention/waste minimization plan (with goals, procedures, training & schedules) is in place for Phase V facility.	K. McDonald B. Barnes L. Olsen B. Giroir	Phase V does not have a separate PP/W-M plan. CWC has chosen to operate under the Hanford Site-Wide PP/W-M program. Phase V will not stabilize container wastes to reduce toxicity, availability to the environment, or reduction of potential facility worker exposure/dose. All similar actions are performed by either the generator of the container, by the WRAP facility or by SWD Generator services. An observation, O. 8.3.4.1, is submitted for this issue.		X

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>4a, S/RID 20.5) Is the P2/WM plan being effectively implemented at other CWC/SWD facilities?</p> <p>* Does CWC/SWD have a written policy showing local and corporate management support for the P2/WM plan objectives?</p> <p>* Are specific goals and objectives in place for Phase V during FY 1997? [40 CFR 372.85]</p>	<p>Review S/RIDs and other drivers.</p>	<p>See above comment.</p> <p>Insufficient time was available to verify non-Phase V implementation activity.</p>		<p>TBD</p>
<p>4b, S/RID 20.5) Will wastes be treated to meet compliance requirements (stabilize, reduce toxicity, availability to environment, reduce facility worker radioactive dose, etc) during storage?</p> <p>* Are sufficient CWC personnel trained to implement P2/WM program requirements in Phase V? [WAC 173-303-030]</p>	<p>K. McDonald B. Barnes L. Olsen B. Giroir</p>	<p>Insufficient time available to verify implementation outside CWC.</p> <p>A review effort is underway to evaluate the S/RID content and streamline CWC operation in accordance with the Strategic Plan and Technical Baseline.</p>		<p>TBD</p>

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION-5:

There is a formal program which defines the inventory control, release prevention, and use of chemicals and toxic materials.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
5) Verify documentation exists for a program which defines the training and use of chemicals and toxic materials, within Phase V and the CWC.	K. McDonald B. Barnes L. Olsen S. Adelman M. McChesney Examined Hazards Awareness Program Plan (IP-0845, section 1.8)	The program and support were verified and judged adequate. Selected CWC/EC personnel are involved in hazards awareness briefings. Briefings are given regularly about every 2 months. Training and safety attendance records are maintained by the EC staff.	X	
5a) Verify that inventory control procedures are in place for monitoring and limiting the type and unnecessary quantity of chemicals and toxic materials purchased.		This issue is covered in PP/W-M activities. CWC currently follows the site-Wide PP/W-M program. Insufficient time was available to verify how SWD/CWC implements quantity controls on purchases of hazardous materials.	n/a	TBD

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>5b) Verify procedures are in place to prevent/minimize the release of toxic chemical materials from Phase V to the environment. Verify implementation at other CWC facilities.</p>	<p>Emergency Drill Participants and Observers</p>	<p>General level of needs associated with proper conduct and response during off-normal operations was judged inadequate.</p> <p>Hazards awareness at CWC and preparations for Phase V utilization do not give balanced attention to both radioactive and non-radioactive sources in the possible Phase V waste stream inputs.</p> <p>NOTE: On May 14, during the Phase V ORR evaluation, a chemical explosion occurred at the PFP facility. This event should reinforce the on-going need to improve the chemical hazards awareness efforts, prior to stating full Phase V readiness.</p> <p>A finding, F.8.3.5.1, is submitted which includes recommendations to improve non-radioactive hazards awareness.</p>		<p>X</p>
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PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 6:

A Response Action Plan or equivalent document is in place, which includes specific responsibilities for, and procedures to assess, all releases potentially subject to reporting and notification requirements.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
6) Verify that response action plans or equivalent documents are in place, which establish the nature and scope of the response action program.	Emergency Drill Participants & Observers	Because of crowded conditions, this ORR member did not act as an official observer, but did visit the lower command post and talk with the ORR observers prior to the execution of the drill. Was a participant in the post drill debriefing. The S/RID requirement, to evaluate or determine notification need to higher officials was the only action to estimate air releases. This is partial basis for judgement that the drill was unsatisfactory. See finding F.8.3.5.1 for other details.		X

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

6a, S/RID 20.2) Are procedures in place and staff trained to meet monitoring & reporting requirements due to Phase V registration as a point source?	Same as above, K. McDonald B. Barnes J. Skolrud	Records structure is maintained in the CWC/EC Regulatory Issues file. Data for compliance reports is collected and forwarded to central RUST ES Reports organization. User guide is available for input/retrieval of data from SWITS database. Desk instructions are used for compilation of reports, validation and issuing schedule.	X	
6b) Verify that CWC/SWD staff understand responsibilities and procedures to assess all Phase V releases potentially subject to reporting and notification requirements.	K. McDonald M. McChesney	Training program is evaluated under Core Requirement 2. CWC/EC operation was examined, along with general level of understanding for organization staff. ETJAs had just been completed when the ORR began.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>6c) Are these procedures being effectively implemented in nearby CWC/SWD buildings?</p> <p>* Verify that sufficient personnel are trained and available on a round-the-clock basis to respond to the above actions.</p> <p>[Coordinate the response and supporting documentation with lead ORR reviewer for training].</p>	<p>K. McDonald B. Giroir R. Irwin J. Winterhalder</p>	<p>Management expressed that current staffing levels are adequate for normal operations in existing CWC facilities plus addition of Phase V buildings. All 24XX-series of buildings are served by same personnel. CWC can draw on other SWD staff if workscope requires.</p> <p>Normal operation/waste movements into Phase V buildings are on day-shift. Off-normal response is by selected staff "on-call."</p>	<p>X</p>	
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PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 7:

All required permits for construction and operation are possessed and associated requirements are in effect.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
7) Verify that all required permits for construction and Phase V operations (e.g., air, water, waste, TSD, etc) are possessed (or on file at SWD) and associated requirements are ready to be implemented.	K. McDonald	Regulatory documents, including permits, applications, supporting studies, (everything except actual construction) are maintained in CWC EC manager area. Regulatory File Index is used as a road map to facilitate individual document/document retrieval.	X	
7a) Verify that all Phase V environmental permits and studies are completed; all permit requirements and actions identified by environmental reviews, analyses or studies, have been completed or are captured within the CWC/SWD compliance program; no additional permits or studies are required.	K. McDonald B. Barnes L. McDonald	Same comment as above.	X	
7b, S/RID 20.1) Was a review of Phase V project scope made to determine compliance to National Environmental Policy Act requirements [10 CFR 1021 et seq]? Do the CWC/SWD program files contain evidence of this review?	G. Cummins	NEPA evaluation in environmental assessment (DOE/EA-0981) developed by central ES organization, issued Sept 1995.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>7c, S/RID 20.1) Has DOE/RL determined that Phase V is covered for NEPA under pre-existing documentation?</p> <p>* Is the change to the Interim Safety Basis noted and accounted for in the NEPA documentation?</p> <p>* Is a copy of the DOE NEPA designation (ROD/FONSI) available in CWC/SWD project files?</p> <p>* Was a separate SEPA review made, or SEPA checklist submitted? [WAC 197-11 & 352-11]</p>	<p>Examined EA/FONSI for CWC/SWD Phase V proposed action(s).</p>	<p>A Finding of No Significant Impact (FONSI) was signed by the DOE/RL site manager and bound into the EA document.</p> <p>The EA/FONSI is maintained in the Site-wide NEPA characterization library, by the central ES organization.</p>	<p>X</p>	
<p>7d, S/RID 20.2) Will the Phase V facility operate as a Resource Conservation and Recovery (RCRA) treatment/storage/disposal facility [WAC 173-303-400]?</p> <p>* If so, is a RCRA Part A permit in place?</p> <p>* Has supporting data for the RCRA Part B permit been submitted for inclusion in the overall Hanford RCRA permit?</p>	<p>SWD Strategic Plan & Technical Baseline Document</p>	<p>By customer (DOE) decision, the Hanford facilities will comply with all legislated requirements, including Resource Conservation and Recovery Act (RCRA) treatment, storage & disposal requirements, as applicable.</p>	<p>X</p>	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>7e, S/RID 20.2) Has a license to operate been granted for Phase V by the State? [WAC 246-247-060]</p> <p>* Have emissions data been estimated and submitted for inclusion in the next revision of the Hanford Air Operating Permit?</p>	<p>B. Giroir K. McDonald B. Curn</p>	<p>The Phase V facilities were built as a turn-key project. Construction was regularly overseen by State & Federal regulators. All proposed emissions data are included in the NOC (DOE/RL-95-79).</p>	<p>X</p>	
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PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 8:

All environmental reviews and studies have been performed.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
8) Verify that all environmental reviews and studies (required per CM-6-2 & CM-7-5) have been performed (e.g., NEPA, BARCT, T-RACT, ALARACT, etc.)		Environmental reviews and studies are part of the project design & management requirements (CM-6-2). Environmental compliance is assured by multiple reviews/studies by both the CWC facility and the central ES organization. Comments and quality changes to the facility design/implementation requirements are maintained in the project construction file for the operating life of the facility. Verification of the construction records was not made, due to time limitations.	X	

PHASE V STORAGE ORR APPRAISAL FORM

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8a) Coordinate verification with ORR safety reviewer, to ensure that no conflict exists between the environmental boundary of operation, defined in the reviews, and the ISB document.	K. McDonald B. Barnes L. Olsen	The ISB has been and S/RID current being reviewed for possible conflicts and effectiveness. Review of the S/RID is covered by Observation 0.8.3.1.1. See comments also from ORR member on Safety.	TBD	
8b, S/RID 20.2) Were any waivers to existing Hanford operating permits required as a result of the proposed operational scope of Phase V? * If so, were any compliance plans developed as a result of Phase V review by technical authorities? [WAC 173-480]	K. McDonald B. Barnes L. Olsen	No waivers apply to Phase V. No recovery plans apply.	n/a	

PHASE V STORAGE ORR APPRAISAL FORM

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CRITERION 9:

A system is in place to provide estimates of quantities and assess integrated impacts of releases of hazardous material on personnel, the public and the environment.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
9) Verify that inventory control procedures are in place for monitoring and limiting the type and quantity of toxic and chemical materials purchased by CWC.	K. McDonald B. Barnes L. Olsen R. Irwin Examined POPs Index Examined selected POPs from HLAN ISB	Each facility, including Phase V buildings have a radioactive inventory control limit(s) as specified in the ISB. Only the 616 building has explicit controls for handling of hazardous, non-radioactive materials. The SW Acceptance criteria (EP-0063-4) has the primary controls for incoming waste packaging. These are administratively controlled as if separate facilities.	X	
9a) Verify that procedures are in place for Phase V to prevent the release of toxic and chemical materials to the environment. * Verify training and implementation at other CWC facilities.	Same as above, plus Drill participants	Drill participant awareness of non-radioactive hazards and appropriate off-normal responses judged inadequate. A finding, F.8.3.5.1, is submitted to improve this issue.		X

PHASE V STORAGE ORR APPRAISAL FORM

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<p>9b, S/RID 20.3) Is a procedure in place to track and close deficiencies identified by inspections at Phase V?</p> <p>* Are sufficient numbers of CWC/SWD personnel trained in order to implement at Phase V?</p> <p>* Are similar procedure being effectively implemented at other CWC/SWD facilities?</p> <p>* [Coordinate answers with ORR reviewer for Core Requirement 6.]</p>	<p>K. McDonald B. Barnes L. Olsen M. McChesney</p> <p>Examined POPs Index S/RIDs Training files</p>	<p>The FEB did not issue any findings against the environmental training part in this area of ORR. The CWC EC maintains its own action list for low-impact deficiencies (housekeeping, etc). Compliance deficiencies are put on the Hanford Action Tracking System by the person who identifies the item/issue.</p> <p>Threshold action limits are determined outside the CWC. This requirement is a partial basis for finding F.8.3.5.1, due to critique of the drill.</p>	<p>X</p>	<p>TBD</p>
<p>9c, S/RID 20.6) Will Phase V operations require support from on-site laboratory to meet waste composition/identification/analysis/designation, labeling, segregation, and storage requirements?</p> <p>* If so, is an interface procedure in place to define how samples will be taken, packaged, transported, custody controlled, and disposed of after analysis? [40 CFR 372.30]</p>	<p>K. McDonald B. Barnes B. Giroir</p> <p>Examine S/RIDs Examine POPs Index</p>	<p>Phase V will not generate samples for the laboratory. Selected verification of container waste contents/designation is done before receipt at Phase V.</p> <p>Verification of Sampling by the Waste Generators at other SWD facilities was not done due to insufficient time.</p>	<p>n/a</p>	<p>TBD</p>

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 10:

Hazardous substances are monitored, sampled and analyzed in order to support notifications and reporting to authorities.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
10) Verify that procedures for operating monitoring, sampling and laboratory analysis equipment to support Phase V are in place.	n/a	Monitoring and sampling are not performed inside of Phase V. Wastes must meet characterization/labeling requirements before being accepted at CWC.	n/a	
<p>10a) If these activities will be done by CWC/SWD personnel, verify training (or certification) is current.</p> <p>* If activities will be done by non-CWC personnel, verify the administrative program for training is being implemented.</p> <p>* If activities will be done by non-PHMC laboratory/contractor, verify the source quality program has been reviewed by appropriate oversight organization.</p>	n/a	See above comment.	n/a	

PHASE V STORAGE ORR APPRAISAL FORM

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<p>10c) Verify that a sampling constituent list has been defined for Phase V, and that similar lists of analytes are in place for similar CWC facilities.</p>	<p>B. Barnes L. Olsen</p>	<p>Two collections of Material Safety Data Sheets are maintained to support Phase V. One at the control point trailer (MO-288), the second by the Hanford Fire Dept. All hazardous materials received for project/facility use are required to file a copy of the MSDS with the JHFD, and maintain another in a ready referenced location for the facility workers.</p> <p>Phase V will not maintain a separate hazards inventory, apart from the facility log and SWITS.</p>	<p>X</p>	
<p>10d, S/RID 20.3) Is a procedure in place to notify the Hanford Fire Department of all hazardous chemicals to be kept in Phase V buildings? -- and to notify HFD of waste inventory changes due to Phase V operations?</p> <p>* Are Material Safety Data Sheets readily available to facility workers and the HFD in case emergency response actions are required?</p> <p>* Does the HFD have a suitable records system to retrieve and use this data? [40 CFR 370.21]</p>	<p>see above</p>	<p>See above comment.</p> <p>Insufficient time was available to verify how the HFD maintains their file of MSDS and other response information, specific to Phase V.</p>	<p>TBD</p>	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>10e, S/RID 20.3) Are sufficient numbers of CWC workers trained to use the above notification procedures?</p> <p>* Are the above procedures being effectively implemented in other CWC/SWD buildings?</p>	<p>Drill Participants & Observers</p>	<p>Drill responsibility was judged unsatisfactory in this area. See finding F.8.3.5.1</p>		<p>X</p>
<p>10f, S/RID 20.6) Is a procedure in place to provide the following information in annual report(s): Emission inventory, monitoring, investigation by oversight groups, demonstration/testing for regulatory compliance, air flow rate(s), average emission rate & emission logs, shutdown notifications, decontamination/decommissioning/closure plans? [WAC 246-247-80 and 40 CFR 61 parts H & I]</p>	<p>K. McDonald B. Barnes B. Curn L. Olsen J. Skolrud J. Winterhalder</p>	<p>Desk instructions and a database user guide are available to control data retrieval for reports. Specific data for Phase V are in the NOC (DOE/RL-95-79).</p> <p>Operational data have not been generated, yet. Data are copied to originator for verification/validation prior to issuing the annual report(s).</p>	<p>X</p>	<p>n/a</p>

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION-11:

Environmental Sampling Programs are conducted to establish a baseline for radioactivity in the environment near Phase V buildings, and establish a baseline for comparison in the event of excursion.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
11) Review procedures and observe operations of equipment used for sampling, monitoring, and analyzing hazardous substances. [See Criterion 13, also.]	n/a	Insufficient time was available to verify this issue, beyond what is provided in the prior comments.		TBD
11a, S/RID 20.2) Were any pre-operational tests conducted to determine effectiveness of the compliance monitoring instruments?	B. Barnes B. Giroir R. Irwin	Insufficient time was available to verify this issue beyond the Phase V buildings.	TBD	
* Was Phase V required to perform a compliance demonstration test to verify meeting BARCT and ALARACT goals?		The State regulators had a representative on sit for the majority of the construction of Phase V facilities. They were aware of, but chose not to attend the ATP/OTP activity.	n/a	
* Has a similar performance demonstration been performed for any nearby CWC/SWD facility?				
* Was opportunity to observe these tests offered to the State regulators [WAC 246-247 et seq]?				

PHASE V STORAGE ORR APPRAISAL FORM

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11b) Verify that the Phase V facility has sufficient staff trained and able: to characterize wastes, to determine if releases are occurring, to collect data for notification and reporting, in compliance with Federal and State requirements.	K. McDonald	See prior comments on training and staff sufficiency. This activity is outside the scope of Phase V operations. See prior comments.	X n/a	
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PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 12:

Equipment and resources for sampling and analysis of environmental media are in place to assure that significant spills/releases from Phase V storage are not occurring, and radioactive or hazardous materials are not accumulating in the environment.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
12) Verify that the pre-operational baseline assessment of environmental radioactivity levels has been reviewed to ensure that changes in radioactivity levels, significant per regulatory basis, can be determined and measured. Verify the data can be analyzed in a timely manner.	n/a	This is a standard requirement before actual construction can start, per project management manual (CM-6-1). Insufficient time was available to verify data to confirm the item.	TBD	
		The evaluation of radioactivity levels by the CWC/EC staff represents a potential process improvement issue.	TBD	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

<p>12a, S/RID 20.3) Is a procedure in place to inspect Phase V compliance monitoring equipment, which would detect or prevent release of contamination to the environment? [WAC 173-303-320]</p> <p>* Are sufficient number of personnel trained in use of the procedure(s)?</p> <p>* Are similar procedures effectively implemented at other CWC/SWD facilities?</p>	<p>B. Barnes L. Olsen</p>	<p>This is outside the scope of the CWC Environmental program.</p> <p>Only standard instrumentation is the air samplers, which are a maintenance worker responsibility.</p> <p>The EC facility inspections focus mainly on facility/waste container integrity.</p>	<p>n/a</p> <p>TBD</p>	
<p>12a) Verify that CWC/SWD has supplied data to the most recent Hanford Site-wide Environmental Report.</p> <p>* Verify that CWC Environmental Compliance reviewed the data for applicability/trends and suitability of administrative controls at Phase V.</p>	<p>Hanford Site annual Environmental Report (1995)</p>	<p>SWD/CWC contaminants tracked as part of the overall 200-West Area summary in annual report. No non-compliant issues identified.</p>	<p>X</p>	
<p>12b, S/RID 20.6) Is a procedure in place to respond to spills and other unplanned releases from Phase V?</p> <p>* Are sufficient numbers of CWC personnel trained to effectively implement the procedure?</p> <p>* Are similar procedure being implemented at other CWC/SWD facilities?</p>	<p>Drill participants & observers</p>	<p>Phase V will use the same response procedures as the other dry storage buildings.</p> <p>Program requirements in current documents are judged adequate, but response actions for non-radioactive hazards judged unsatisfactory. See Finding F.8.3.5.1.</p>	<p>X</p> <p>X</p>	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 13:

Phase V Sample and Analysis procedures are in place.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>13, S/RID 20.3) Are procedures in place to evaluate container contents as mixtures of hazardous, radioactive, or extremely hazardous/dangerous materials (wastes), which are to be received into the Phase V buildings, and apply the applicable management controls?</p> <p>* Are suitable numbers of personnel trained in use of these procedures, and effectively implementing them in other CWC/SWD buildings?</p>	<p>B. Barnes L. Olsen</p> <p>Examine S/RIDs EC manual (CM-7-5) Training records file</p>	<p>Insufficient time was available to verify all details of this requirement.</p> <p>Sampling and designation is done within CWC by the Generator Services organization. The same procedures in use for all CWC facilities.</p> <p>Waste containers should be characterized prior to receipt into the Phase V facilities.</p>	X	TBD
<p>13) Review procedures and verify training/operations of equipment used for sampling, monitoring, and analyzing hazardous substances in incoming and stored Phase V containers. [See Criterion 11.]</p>	n/a	<p>Insufficient time was available to verify.</p>		TBD

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

13a) If analysis of samples is to be done by non-CWC personnel, verify per approach # 10a.	B. Barnes	Sampling/analysis is outside the scope of Phase V operation.	n/a	
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PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 14:

Personnel in CWC Environmental Compliance have the needed knowledge, skills and abilities to conduct the program.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
14) Interview random CWC personnel who will support Phase V operations. Verify that sufficient training or certification has been completed to provide coverage for all required actions in the facility, plus at least one backup person.	K. McDonald B. Barnes L. Olsen S. Adelman M. McChesney	The ETJAs have been completed for CWC/EC staff. Training records are being maintained, annual retraining is scheduled. Interviews with staff demonstrate good understanding and competency to operate. Level of knowledge is also covered by ORR Core Requirement 3.	X	
14a) Verify that a job skills analysis or similar evaluation has been made for all key personnel assigned to support Phase V. Coordinate verification of criterion 14, with ORR reviewer(s) for Core Requirements 2 & 3.	n/a	These activities outside the scope of CWC/EC involvement to support Phase V. See comments on approach 13, above. Waste containers must be (sampled) characterized/designated prior to receipt into Phase V buildings.	n/a	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 15:

Phase V storage impact has been assessed by independent monitoring groups and appropriate actions have been made.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
15) Verify that corrective actions identified by the Facility Evaluation Board and/or other external oversight groups have been closed or suitably dispositioned.	Facility Evaluation Board Report, from FEB evaluation during Dec 9-20, 1995.	No environmental program deficiencies identified by FEB team.	X	
15a) Verify that all pre-start items from environmental compliance perspective at the facility have been dispositioned.	Hanford Action Tracking System	CWC/EC has no outstanding items on HATS for Phase V. A pre-acceptance action based on the facility self assessment has been generated and is referenced in Observation 0.8.3.2.1	X TBD	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

CRITERION 16:

Intra-building waste movements are controlled.

APPROACH:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
16) Verify administrative controls for intra-building waste movements are issued and applicable to Phase V implementation.	B. Barnes L. Olsen K. McDonald POPs Index	CWC/EC routinely reviews all work packages, for large quantity movements of waste. EC does not review small quantities, except at request of cog engineer/manager.	X	
16a) Verify environmental requirements, waste packaging requirements, and safety basis (ISB) requirements for Phase V are incorporated in controls for intra-building waste movements.	Examine POPs ISB WAS sections CM-7-5	Specific procedures not used only to control intra-building waste movement. This issue is a potential for process improvement and is submitted as an observation.	TBD	
16b, S/RID 20.2) Does Phase V operational scope include use of any buried piping to transport, store or treat liquid (either hazardous, radioactive, mixed or non-hazardous) wastes? * If so, is monitoring capability readily available to determine if leaks can impact the groundwater?	n/a	Phase V has no buried piping. CWC has no known piping for waste transmission, treatment or storage. The TRUSAF has some short run underground piping, which was not assessed during this ORR.	n/a	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.3: There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

16c) Verify these or similar controls are being effectively implemented at other CWC/SWD facilities.	n/a	Inadequate time was available to verify this issue.		TBD
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PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: 8.4

There is an adequate fire protection program.

Criteria:

1. The Hanford Fire Department is cognizant of CWC's needs and have taken appropriate actions to meet.
2. Administrative procedures are established to control specific fire hazards.
3. All facility fire hazards are identified and evaluated on a continuing basis. A Fire Hazard Analysis is documented and complete.
4. Requirements of NFPA and Life Safety Code are specified, implemented, and maintained.
5. Fire protection systems and equipment are available as specified in fire protection program documents.
6. A pre-fire plan is in place and it reflects the current conditions in the facility.
7. A qualified cognizant individual is identified as the single point of contact for CWC's fire systems and fire protection program.
8. Procedures/policies provide for appropriate notifications of fire protection system outages.
9. Provisions are made for the proper storage of radioactive, flammable, and combustible materials.
10. Fire emergency procedures are established and implemented.
11. Means of controlling liquid run-offs from a credible fire are provided so that contaminated (including non-radiological containments) liquids, including potentially contaminated water resulting from fire fighting operations, will not escape to the environment.

Approach:

1. Identify and review procedures related to fire protection. Verify that procedures are in place for combustible and flammable materials, hot work including cutting and welding, smoking, and fire protection system impairments. Inspect existing conditions to determine implementation of the identified procedures.

2. Review the Fire Hazards Analysis to determine that all facility areas and fire hazards are included. Determine that operating parameters were considered, including unusual operations, ventilation requirements, maintenance activities, and radiation control parameters.
3. Review the fire protection program and assure the requirements for periodic review are identified. Review work control procedures to confirm the requirement for independent safety review (fire protection) in the modification approval cycle. Interview engineering and Safety personnel to determine the level of understanding of the review process.
4. Verify that construction has implemented the Fire Protection requirements identified in Construction specifications through design and installation.
5. Inspect the facility to observe existing conditions for compliance to fire protection requirements, such as; 1) Proper portable fire extinguishers are mounted, marked and operable, 2) Activities site access is clear and unobstructed for emergency vehicle response, 3) Fire hydrants are accessible, 4) Exits are arranged and maintained to provide free unobstructed egress from the facility, 5) Exit routes are clearly marked and illuminated where required, 6) Emergency lighting is provided and operable where required, 7) Proper storage of radioactive, flammable and combustible material.
6. Interview the Fire Department to ensure they are cognizant of CWC's (in general) and Phase V Storage (in particular) needs and have taken all appropriate actions.
7. Ensure a Pre-Fire Plan is in place which adequately encompasses the facility.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Fire Protection System	Fire Protection water System Paul Hemsworth	Observed that some of the valves on the fire protection system are not labeled. Still need to ask a Fire Protection Engineer to look at the systems for proper labeling		

2) Fire Protection System	Preventive Maintenance and Regular Maintenance Paul Hemsworth	Asked if the fire protection system is tracked and completed by the Hanford Fire Department. The HFD works with maintenance schedulers to complete PM's and regular maintenance.	X	
3) Fire Protection	Fire systems reviewed during this Core Requirement review and Core Requirement 15's review showed a deficiency in the area of installation and valve tagging and was reported on Finding in Core requirement 15			XX

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.6 - There is an adequate quality assurance organization and program.

APPROACH:

1. Identify and evaluate Quality Assurance Program documentation for adequacy and assess the facility for compliance to WHC-CM-5-34.
2. Review work packages to verify QA personnel approval when required.
3. Verify proper QA approval of procedures and oversight on specific work items.
4. Use WHC-CM-5-36, Chapter 4-2 and QR 19.0 to determine that the software is properly controlled and maintained.

CRITERIA:

1. The QA program is clearly defined and documented, has well defined interfaces and responsibilities, and includes a well defined system for audits, surveillances, document review, corrective action, and follow up. There are procedures for systematic reviews and audits, including self-assessments.
2. Quality assurance reports are distributed to the appropriate level of management. The reports reflect adequate and timely QA reviews.
3. Administrative controls are implemented by management to maintain control of the quality assurance program elements.
4. Acceptance/operational tests and inspections are verified to be accurate and complete for systems important to safe operations.
5. Calibration of measurement, test, and monitoring systems are ensured and verified.
6. The QA program is effectively implemented through QA review and approval of procedures and work activities on safety class equipment and personnel safety items.
7. QA personnel have the necessary knowledge, skills and abilities to actively participate in the QA program. (Assessed under Core Requirements 2 and 3, provided here for information and completeness).
8. Software is adequately controlled.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO

<p>1) 8.6 There is an adequate QA Org. & Program</p>	<p>1. QA Program documented in WHC-CM-5- 34 sect. 1.9 & Appen A - QA program index. FM - Robert Giroir OPS - Paul Crane QA - Dave Vance ENG - Mat Irwin RC - Brad Brannan EC/T- Kent McDonald</p>	<p>The QA Program hierarchy of documents includes 10 CFR 830.120, WHC-CM-4-2, and WHC-5-34. section 1.9. QA reports independently up through the Vice President ES&H. The QA staff are hard lined to that organization with dotted line reporting to facility management. Dave Vance is the QA representative for CWC & can draw additional resource from the other QA staff members. The FDH QA program is being revised and is due to be issued for DOE approval by 7/1/97. This will be followed within 120 days with the implementing QA program and procedures from RFSH which will mesh with the new S/RIDs and operating procedures being issued by RFSH. This work is ongoing.</p>	<p>X</p>	
	<p>2. Review work packages to verify QA personnel approval when required. QA - Dave Vance OPN - Paul Crane OPN - Mike Aichele OPN - Jim Mitchell ENG - Mat Irwin</p>	<p>The responsibility for determination of QA review of work packages or other work control documentation is by the Cog. Engineer. Most work is performed as a routine and work packages are seldom used except for seldom performed tasks or for one time unique tasks. There were no work packages requiring QA review and approval. The QA representative attends the POD meetings and facility staff meetings and provides input as requested or deemed appropriate by him. Procedures are reviewed and approved by the QA representative</p>	<p>X</p>	

	<p>4. WHC-CM-5-36 SWD Internal Requirements -</p> <p>SWITS Final Verification & Validation Report for Initial Implementation</p> <p>ENG - Mat Irwin OPN - Paul Crane ENV - Kent McDonald RC - Brad Brannan SP - Darlene Hage1</p>	<p>There was no software recognized by those interviewed in CWC as needing application of QA requirements. QR 19.0 of WHC-CM-5-36, Chapter 4-2 Appendix B defines systems that are subject to the software QA rqmts. specified therein. The SWITS system appears to meet several of these requirements. Para. 5.1.3 imposes minimum user requirements found in Para. 4.4.1. The SWITS software is properly controlled and maintained by the RFSH Strategic Planning Org. under Ken Hladek. Verification and Validation were accomplished under the requirements of WHC-CM-4-2 QA Program and per IEEE STD. 830-1984. Strategic Planning provides user training on a 1-on-1 basis as required. A training manual has been prepared. This training is informal and undocumented due to the frequent changes of user personnel.</p>	X	
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PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Review the organizational structure of the health physics group and its relationship to the line management structure. Determine if the organizational structure is clearly defined.

CRITERIA: Organization and administration of the HP program ensures effective implementation and control of HP activities.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Are there sufficient numbers of qualified and knowledgeable personnel in Radcon to support safe operations? (HSRCM Art. 141.2, 143.1)	P. B. Brannan - SWM RadCon Manager SWM RadCon Staffing List and training files examined.	The RadCon Manager and Health Physicist are NRRPT certified. The RC organization is sufficiently staffed and knowledgeable to support safe operations.	X	
2) Are all RPP elements audited tri-annually? (10 CFR 835.102)	Self Assessment Program / 10 CFR 835 V & V process. P. B. Brannan and E. J. Millikin	The SWM RadCon staff will complete the tri-annual assessment of the Radiation Protection Program by Sept. 1998. Efforts are underway to complete most program assessments by the end of CY'97.	X	
3) Do audits include program content and field implementation? (10 CFR 835.102)	Self Assessment Program / 10 CFR 835 V & V process. P. B. Brannan and E. J. Millikin	The 10 CFR 835 V & V process will include both program and field implementation assessments.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Interview the Health Physics Manager and staff members to determine if adequate resources are provided by consistent with the radiological risk of the facility as defined in the ISB and CSER.

CRITERIA: Personnel performing health physics duties have successfully completed HSRCM training and qualification program. (Assessed under Core Requirements 2 and 3, provided here for information and completeness)

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) All RCTs passed a comprehensive written exam within last 2 yrs? (HSRCM Art 643.1)	RCT training files. P. B. Brannan	All RCTs have successfully passed the written exam within the last two years and are qualified.	X	
2) All RCTs passed an Oral Board within last 2 yrs? (HSRCM Art. 643.1)	RCT training files. P. B. Brannan	All RCTs have successfully passed oral boards within the last two years and are qualified.	X	
3) The facility RadCon Manager has qualified as an RCT and participates in continuing training? (HSRCM Art. 344.1)	Soft Reporting Records. P. B. Brannan	The facility RC Manager has successfully passed written exams and oral boards within the last two years and is currently qualified. The RC manager participates in RCT continuing training.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Review operating procedures and health physics procedures to determine their adequacy in supporting normal, process upset, and documented emergencies. Assume they were prepared in accordance with the approved Writers Guide.

CRITERIA: Programs to control radioactive material are effective in: 1) providing adequate packaging, labeling, accountability, and safe transportation of such material; and 2) minimizing the contamination of areas, equipment, and personnel.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Are routines conducted at radiological area boundaries. (HSRCM Art. 551)	Routine task Descriptions SW-CWC-W035, W036, W037, M022, M023, and M024. P. B. Brannan	Routine survey program meets requirements	X	
2) Do release procedures contain release criteria and are procedures complied with in the field. (HSRCM Art. 422)	POP SW-150-011/A-1, Release Surveys	Procedures are adequate to ensure compliance.		
3) Are items found to be above the release criteria when surveyed controlled as radioactive material? (HSRCM Art. 422)	POP SW-150-011/A-1, Release Surveys	Procedures are adequate to ensure compliance.		
4) Do personnel exiting radiological areas monitor in accordance with posted requirements? (HSRCM Art. 338)	ORR Drill exercise	Though the CWC complex does not require exit surveys for the buildings, contamination surveys were infrequently performed during the observed drill. (see drill write up)		X

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Verify exposure records are maintained for appropriate personnel.

CRITERIA: Programs to evaluate, monitor, and control internal and external radiation exposure, (e.g., dosimetry, exposure records, trend analysis, bioassay program, work area radiation records, procedures, etc.).

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Does management compile data and are they aware of trends regarding radiation exposure, radioactive waste management, and contamination control within the facility? (HSRCM Art. 551)	P. B. Brannan, E. J. Millikin P. J. Crane, J. Mitchell	Though management does not officially trend data, they do review survey data to determine if action levels were exceeded. Management is aware of personnel exposure trends.	X	
2) Are personnel wearing appropriate dosimetry when entering radiological areas? (HSRCM Art. 332, 334, 335)	B. Rogers and Mike Aichele	Personnel wore appropriate dosimetry prior to entering Radiation Areas.	X	
3) Do facility RWPs state internal dosimetry requirements? (HSRCM Art. 521)	RWPs SW-001 Rev 012, SW-017 Rev 010, SW-046 Rev 002, SW-047 Rev 002, SW-050, SW-051, SW-052, SW-125 Rev 011.	RWPs SW-052 and SW-125 Rev 011 state internal dosimetry requirements.	X	
4) Does the facility have an area dosimetry program? (HSRCM Art. 514)	J. D. Butler P. B. Brannan E. J. Millikin	SWM RadCon is in the process of implementing an Area Dosimetry Program.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Review radiological survey procedures and techniques for the release of materials to clean areas.

CRITERIA: Programs to control radioactive material are effective in: 1) providing adequate packaging, labeling, accountability, and safe transportation of such material; and 2) minimizing the contamination of areas, equipment, and personnel.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Instruments used for radiological monitoring are adequate to measure the intended radiation types, levels, and energies? (10 CFR 835.401.c)	ORR Drill exercise	The RCTs who initially responded to an emergency situation did not have an instrument capable of obtaining dose rates. It should be noted that the back up responding RCT did have a dose rate instrument.	X	
2) Contamination surveys incorporate techniques to detect both fixed and removable contamination? (HSRCM Art. 554.3)	ORR Drill exercise	The RCTs responding to the ORR Drill did not perform swipes for removable contamination (see drill write-up).		X
3) Is material that has been surveyed and found with contamination levels greater than HSRM Table 2-2 labeled and controlled as radioactive material? (HSRCM Art. 412)	POP SW-150-011/A-1 Release Surveys.	Material stored in the CWC buildings have been posted as Radioactive Material.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Ensure contamination control procedures are understood by interviewing field personnel, performing a facility tour and reviewing documentation.

CRITERIA: Contamination controls are adequate to protect the worker (e.g., PPE removal procedures are posted, contaminated and non contaminated areas are routinely surveyed, laundry procedures minimize contamination spread, air borne generating devices, such as fans and vacuum cleaners, are adequately controlled, personnel monitoring is adequate, decontamination facilities are available, proper engineered barriers, etc.).

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Is monitoring of areas performed to document and characterize radiological conditions in the workplace, detect changes in radiological conditions, and to control potential sources of radiation and/or radioactive material. [10CFR835.401(a); HSRM Art. 551]	Routine task Descriptions SW-CWC-W035, W036, W037, M022, M023, and M024. P. B. Brannan	Routine survey program meets requirements.	X	
2) Personnel remove protective clothing in a manner that minimizes personnel and clothing contaminations and perform exit surveys. [10CFR835.404(g); HSRM Appendix 3C]	P. B. Brannan	Protective Clothing is not normally required at the CWC complex. Did not witness removal of PC, but discussions concluded practice is adequate to prevent the spread of contamination.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Review operating procedures and health physics procedures to determine their adequacy in supporting normal, process upset, and documented emergencies. Assure they were prepared in accordance with the approved Writers Guide.

CRITERIA: A documented, acceptable air monitoring program is in place, and is supported by sufficient studies (e.g., air flow patterns, particle size, etc.).

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Do the type and location of air sampling and monitoring equipment used meet the requirements of the facility workplace air sampling program? [10CFR835.403; HSRM Art. 555]	WHC-SD-SQA-TA-20014 Rev 1A Workplace Air Sampling for CWC P. B. Brannan E. J. Millikin	The CWC buildings do not meet the criteria for Workplace Air Sampling. Facility RadCon will revise the document to include the 2404 series buildings. Initial studies determine WPAS is not required, however, approximately one month of air sample data will be evaluated prior to the revision of the SD.	X	
2) Do the facilities have record air samplers to monitor all facility exhaust in accordance with the ISB. (step 2.1.8.3, pg 2-24)	WHC-SD-SQA-TA-20014 Rev 1A Workplace Air Sampling for CWC P. B. Brannan E. J. Millikin	An ECN was submitted to remove the "record" air sample statement from the ISB. The air sample for all CWC facilities are non-record.	X	
3) Are monitoring and workplace records including airborne radioactivity monitoring records maintained to demonstrate compliance with 10 CFR 835 Subpart E? [10 CFR 835.701(a)]	Air sample counter logs P. B. Brannan E. J. Millikin	Records of air sampling data are maintained and reviewed by RadCon Management.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Verify an ALARA program has been established and is being utilized.

CRITERIA: An ALARA program has been established and successfully implemented. ALARA program has taken into account all facets of exposure reduction (e.g., posting hot spots, shielding, special tools, monitoring, traffic routing, location of office areas and work stations, protection from transient radiation, adequate communications).

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Is the ALARA process applied to radiological work as evidenced by pre-job planning, pre-job briefings, and ALARA reviews? [10CFR835.101(c); HSRM Art. 311, 312, 313, 315]	HNF-CM-5-34 J. D. Butler J. Mitchell P. J. Crane	Discussions with facility personnel concluded that the ALARA process has been applied to numerous activities throughout SWM.	X	
2) ALARA records including ALARA meeting minutes, policy and management commitment, assignment of responsibilities, optimizations, design reviews, and radiological work and experiment planning records are maintained. [10CFR835.701(a), 704(b); HSRM Art. 712(f), 742]	HNF-CM-5-34 J. D. Butler	The 5-34 manual captures the policy and management commitment towards ALARA. The ALARA coordinator was in the process of typing the minutes from previous SWM ALARA meetings.	X	
3) Are corrective actions in response to the FEB report complete?	J. D. Butler	The due date for the new ALARA process was revised to allow for the procedure review cycle.	X	
4) Are corrective actions in response to the FEB report adequate to prevent recurrence?	J. D. Butler	The revised ALARA procedure and applicable training on revised process should be adequate.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Review documentation and tour the facility to ensure proper control of sources.

CRITERIA: Source material is adequately controlled, labeled, handled, shipped, received, and surveyed.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Are the facilities contamination surveys adequate to demonstrate levels outside Contamination Areas are maintained below Table 2-2? (HSRCM Art 554.1.g)	Routine task Descriptions SW-CWC-W035, W036, W037, M022, M023, and M024. P. B. Brannan	Routine survey program meets requirements	X	
2) Do facility personnel properly package their contaminated material (above table 2-2) prior to moving them to uncontrolled areas? (HSRCM Art. 413)	RMAs at CWC P. B. Brannan B Rogers	Radioactive material is properly packaged.	X	
3) Are RMAs posted with the signs in HSRCM, Appendix H2 D, Part A, #6?	RMAs at CWC B. Rogers	Most areas at CWC are properly posted. The Low Flash Point Modules should be posted so signs are visible when doors are open.	X	
4) Does the facility use radioactive material labels that list the date the material was surveyed, surveyor's name, radiation and contamination levels, and description of the item? (HSRCM Art 412.4)	RMAs at CWC B. Rogers	Radioactive material stored at the CWC was labeled with the proper information.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Tour facility and ensure all required status boards are in place to properly define facility conditions.

CRITERIA: Facility status boards adequately represent radiological conditions of the facility and provide enough information to personnel to allow safe operations and minimize exposure.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Does the facilities radiation surveys have a sufficient number of survey points documented so that it characterizes the area being surveyed? (HSRCM Art 551.6)	Routine task Descriptions SW-CWC-W035, W036, W037, M022, M023, and M024. P. B. Brannan	Routine survey program meets requirements.	X	
2) Does the facility perform radiation/contamination surveys before, during and after a job that there is a potential of change in the radiological conditions? (HSRCM Art 551.8)	POP SW-150-005/A-3 Radioactive Shipment and Receipt Surveys P. B. Brannan E. J. Millikin	Procedure are adequate to ensure compliance. Field observations verified procedure techniques were implemented.	X	
3) Are results of current surveys or survey maps conspicuously posted to inform personnel of radiological conditions? (HSRCM Art. 551.10)	J. Mitchell P. B. Brannan B. Rogers	Management and workers were aware of and knew locations of status boards. Workers referred to the status boards prior to entering facilities to familiarize themselves with the radiological conditions.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Tour facility and ensure all required posting, boundaries, radiation monitoring equipment are in place.

CRITERIA: Facility posting is adequate to provide personnel with enough information to allow safe operations and minimize exposure. Posting is in accordance with all requirements.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Is each access point to areas established to control the spread of radioactive contamination (Radiological Buffer Areas, Contamination Areas, High Contamination Areas and Soil Contamination Areas) barricaded and posted to prevent inadvertent entry. (10CFR835.501, HSRM Art 231.1)	Tour of CWC P. B. Brannan B Rogers M. Aichele	The CWC does not meet the requirements for posting areas for these areas. The buildings are correctly posted for the radiological conditions present. The spill kit inspected east of 2404-WB had out dated radiological signs stored inside. Current radiological signs should be stored in the spill kits.		X
2) Physical barriers are placed such that they are clearly visible from all entry approaches. (HSRCM Art 231.10)	Tour of CWC P. B. Brannan B Rogers M. Aichele	With the exception for the Low Flash Point Modules, all access points to the radiological areas are properly posted and controlled.	X	
3) Are routine task in place to ensure posting is adequate for the radiological conditions present? (HSRCM Art 231.5)	Routine task Descriptions SW-CWC-W035, W036, W037, M022, M023, and M024. P. B. Brannan	Routine survey program meets requirements.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

APPROACH: Review and selected RWP's used in critical process areas for applicability, correct controls, accuracy, and completeness.

CRITERIA: Facility Radiological Work Permits (RWP's) are adequate to protect the worker, public, and environment. RWP's contain adequate provisions for protective equipment, work limitations, job descriptions, and special instructions. RWP's are posted at entrances to work areas. Out-of-date RWP's are removed in a timely manner.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Do radiological workers follow the requirements in Radiation Work Permits, radiological work procedures, and technical work documents? (HSRCM Art 341.1)	Tour of CWC B Rogers	Radiological worker wore proper dosimetry and met all entry requirements of the RWP.	X	
2) Are radiological workers following the requirements of Radiation Work Permits, including Personal Protective Clothing and Equipment, dosimeters, and frisking as required by RWP? (HSRCM Art 321, 325, 338)	Tour of CWC B Rogers	Though PPE and frisking are not normally required at CWC, radiological worker wore proper dosimetry and met all entry requirements of the RWP.	X	
3) Are RWP's posted at the access points to the applicable radiological work area? (HSRCM Art 322.6)	Tour of CWC B Rogers	RWP's are posted at the ACES station.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: 8.8

Industrial hygiene and safety programs, policies, and procedures have been developed which are consistent with the hazards present or anticipated in the working environment as well as with DOE Orders and OSHA standards. The overall

program is effectively managed to promptly address and remedy hazards, and systems are in place to communicate information to workers in order to prevent occupational injuries and illnesses.

Criteria:

1. A formal safety and health program has been developed which includes procedures and policies consistent with DOE Orders and OSHA.
5. Sufficient work place surveillance exists to seek and track safety and health hazards. Regular and periodic audits are conducted to assess work place conditions.
8. As a minimum Industrial Safety, Industrial Hygiene, and Nuclear Safety should have assessed the following: A - 1. Work area is safe.

Approach:

1. A review of all relevant aspects of the formal safety and health program will be undertaken to evaluate the content for accuracy, adequacy, and consistency with DOE Orders and OSHA.
2. Safety and health resources, such as staffing, equipment, and the availability of reference resources will be evaluated to determine whether knowledge and tools exist to operate and manage an effective program.
3. Review the frequency of scheduled safety inspections to assure it meets the needs of the facility's mission objective.
4. Review records to determine if they are properly maintained. This review will include injury and illness records and inspection records.
5. A physical walk through of selected areas of the facility will be performed to observe actual work site conditions and practices to assess compliance with existing requirements

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO

1) Confined Space program. 29CFR1910.146	Facility walkdown Gary Mickle	All areas that appear to be possible confined spaces are labeled as such. Individuals knew the classification criteria and knew where the confined spaces were.	X	
2) Confined Space Program 29CFR1910.146	Initial Characterization Gary Mickle	Mr. Mickle indicated that he was the individual responsible for the characterization of the confined spaces and had already performed that task.	X	
3) Confined Space Program 29CFR1910.146	Confined space classification Paul Crane Paul Hemsworth Tony McCullough Jim Irvin	All individuals knew who classified the confined spaces for CWC, including the new storage buildings.	X	
4) Confined Space Program 29CFR1910.146	Confined space locations Paul Crane Paul Hemsworth Tony McCullough Jim Irvin	None individual knew the classification of the manholes around the new storage buildings, but immediately added them to their lists, or knew who to ask to find out.	X	
5)				

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT:

8.8

Industrial hygiene and safety programs, policies, and procedures have been developed which are consistent with the hazards present or anticipated in the working environment as well as with DOE Orders and OSHA standards. The overall program is effectively managed to promptly address and remedy hazards, and systems are in place to communicate information to workers in order to prevent occupational injuries and illnesses.

Criteria:

1. A formal safety and health program has been developed which includes procedures and policies consistent with DOE Orders and OSHA.
2. Sufficient resources are available and dedicated to occupational safety and health to operate an effective program. Personnel, equipment, and reference materials are available to administer the program.
7. A system exists and is utilized whereby employees may identify safety and health hazards to their manager for corrective action without fear of reprisal. Employees are aware of their access rights to information including medical and monitoring records and Material Safety Data Sheets.
9. A system is in place and implemented to estimate quantities and assess the integrated impact of hazardous material releases on personnel and the public.

Approach:

1. A review of all relevant aspects of the formal safety and health program will be undertaken to evaluate the content for accuracy, adequacy, and consistency with DOE Orders and OSHA.
6. Employee interviews will be conducted to determine the extent of their knowledge regarding worker rights, such as Employee Concern program and access to information.
7. Review procedures and observe equipment for sampling, monitoring, and analyzing hazardous substances to ensure that provisions are in place to collect data for notification and reporting as directed by Federal and state requirements.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1)Hazard Communication 29CFR1910.1200	Haz. Com. station/ Paul Crane Gary Mickle Paul Hemsworth Tony McCullough (Painter) Jim Irvin (HPT)	Individuals were well aware of where the Haz. Com. station was located, and who administered the program in Solid Waste Management.	X	
2)Haz. Com. - MSDS	MSDS book, inventory Paul Crane Gary Mickle Paul Hemsworth Tony McCullough Jim Irvin	All individuals were asked to show they understood the information contained in a few MSDS's. All of the people interviewed demonstrated how to read an MSDS and what the information means.	X	
3)				

Core Requirement 8.8 Industrial Hygiene and safety programs, policies, and procedures have been developed which are consistent with the hazards present or anticipated in the working environment as well as with DOE Orders and OSHA standards. The overall program is effectively managed to promptly address and remedy hazards, and systems are in place to communicate information to workers in order to prevent occupational injuries and illnesses.

Approach 1 A review of all relevant aspects of the formal safety and health program will be undertaken to evaluate the content for accuracy, adequacy, and consistency with DOE orders and OSHA.

Criteria 1 A formal safety and health program has been developed which includes procedures and policies consistent with DOE orders and OSHA.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
WHC-CM-5-36, Ch. 1-10 SAFETY 29 CFR 1910 (OSHA)				
<p>1. Review the Health and Safety Plan (HASP).</p> <p>Interview the facility safety rep. and selected management and operators to determine if the knowledge of the HASP is adequate.</p> <p>Does the safety and health program contain the following elements:</p> <ul style="list-style-type: none"> - Organizational structure - comprehensive work plan - site-specific safety and health plan - safety and health training program - medical surveillance program 	<p>CWC HASP</p> <p>Valerie Mitchell Gary Mickle</p>	All appears to be in order	XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>2. Does facility implement and maintain a written hazard communication program?</p> <p>Does this program describe the criteria for warning labels, material safety data sheets, chemical inventory, how employees will be kept informed, and training requirements will be met?</p> <p>Is the program available in the work place?</p> <p>Does the plan include methods of informing other employer's personnel of hazards, labeling systems, and availability of MSDS's?</p>	(See LOI 8-8.hazcom)		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>3. Does facility have a material data sheet for each hazardous chemical which they use?</p> <p>Do any of the MSDS's have any areas not completed?</p> <p>Are MSDS's current, and accurate?</p> <p>Are MSDS's readily available to workers in the work place?</p> <p>(Review a few MSDS's at their location.)</p>	<p>No problems were observed in this area after reviewing a few MSDS's. There is very little chemicals in use in the facility other than the waste that is being stored.</p> <p>V. Mitchell G. Mickle B. Rogers M. Aichele</p>		XX	
<p>4. Prior to work, is all information concerning chemical, physical, toxicologic properties of substances to be encountered communicated to employees?</p>	<p>This is done well V. Mitchell G. Mickle B. Rogers</p>		XX	
<p>5. Do operating procedures provide direction to ensure that potential hazards are identified for correction, and do they ensure that safety requirements are uniformly implemented?</p>	<p>This area was reviewed thoroughly in Core Requirement 1</p>		XX	

Approach 2 Safety and Health resources, such as staffing, equipment and the availability of reference resources will be evaluated to determine whether knowledge and tools exist to operate and manage an effective program.

Criteria 2 Sufficient resources are available and dedicated to occupational safety and health to operate an effective program. Personnel, equipment, and reference materials are available to administer the program.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
WHC-CM-5-36, Ch. 1-10 SAFETY 29 CFR 1910 (OSHA) DOE 5480.10	V. Mitchell G. Mickle			
1. Are qualified staff assigned to direct and operate the safety program?	The two safety individuals are well qualified with proper credentials to operate the safety program.		XX	
2. Does the safety staff have sufficient time and availability to fully implement the program?	They are stretched to the limit in many areas but appear to be able to cover the area sufficiently.		XX	
3. Does the safety staff have the authority necessary to fully implement the program?	The safety staff has the authority needed. The operators also feel they have the authority if needed. B. Rogers		XX	
4. Are qualified Industrial Hygienists identified and available for consultation with line management?	Valerie Mitchell is an Industrial Hygienist and is on the staff at CWC.		XX	
5. Have facility specific safety issues been identified, and have established practices for prioritizing spending for capital improvement projects factor in safety issues as a high priority?	The preoccupancy checklist inspection was thorough and well documented except in the area of illumination. This was noted on finding F.8-8.1 as a prestart finding.			XX

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
6. Is the need for specialized safety equipment and technical resources at the facility identified? Is specialized safety equipment properly maintained in accordance with approved procedures?	Well done. After discussions with operators and safety personnel, and observing in the field, safety equipment is supplied and used properly. B. Rogers M. Aichele		XX	

Approach 3 Review the frequency of scheduled safety inspections to assure it meets the needs of the facility's mission objective.

Criteria 5 Sufficient work place surveillance exists to seek and track safety and health hazards. Regular, and periodic audits are conducted to assess work place conditions.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
WHC-CM-5-36, Ch. 1-10 SAFETY 29 CFR 1910 (OSHA)				

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>1. Is there a self assessment program to evaluate the effectiveness of the safety program?</p> <p>Is the self assessment implemented through a formal plan or procedure?</p> <p>Does the self assessment program incorporate feedback from facility workers?</p>	<p>The self assessment program in effect at CWC appears to be reasonably well suited for finding and fixing basic safety concerns.</p> <p>G. Mickel G. Whitney</p>		XX	
<p>2. Is there a baseline survey of the work area? Does it document potential risks to the workers?</p> <p>Are the results of the baseline document recorded, tracked and ready for inspection?</p>	<p>This has been documented on F.8.8.1 as previously mentioned.</p>			XX
<p>3. Are periodic walk through surveys of the work place conducted by a safety specialist and documented? Are walk through findings reported immediately to management, and tracked to closure?</p>	<p>Yes. Several of the recent walkthroughs were reviewed and discussed with the closure of the items also being reviewed.</p> <p>G. Mickel G. Whitney</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
4. Is there a schedule of safety inspections and is it being followed?	Yes. The safety staff assumes this responsibility and at least weekly walk around the facilities and talk to the workers about safety concerns. G. Mickel B. Rogers		XX	
5. Does management perform safety inspections of the plant on a regular basis? Are findings tracked to closure?	Yes. The management assessment program is scheduled and includes safety inspections as well as con. of ops. type inspections. G. Whitney		XX	

Approach 4 Review records to determine if they are properly maintained. This review will include injury and illness records and inspection records.

Criteria 3 Appropriate record keeping procedures have been established to document injuries, illnesses, and accident occurrences and to permit the ready analysis of such records.

Criteria 6 Noncompliant conditions are documented, corrective actions dates established, and tracking programs implemented to assure prompt abatement of observed hazards. Where engineering or administrative controls are not readily implemented, personal protective equipment is available and used to provide employee protection.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
WHC-CM-5-36, Ch. 1-10 SAFETY 29 CFR 1910 (OSHA)				

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>1. Review established record keeping procedures for reporting and investigating illnesses, injuries, and accidents.</p> <p>Review performance indicators for tracking and trending first aid, recordable, etc.</p>	<p>This is being done. Discussions with safety personnel were positive and records were reviewed.</p> <p>G. Mickel</p>		XX	
<p>2. Review WRTS for open safety items and timely closure. Are safety items reported and tracked to closure?</p>	<p>All items being tracked. This was more fully reviewed in core requirement #6.</p>		XX	
<p>3. Review procedures to determine if PPE is properly called for.</p> <p>Observe workers in facility to determine if PPE is being properly utilized.</p>	<p>One possible weakness is in the response to process upset (drills). This is documented in Core Requirements 8.1 and 9.</p>			
<p>4. Do employees understand their responsibility in reporting injuries, unsafe conditions?</p>	<p>Yes. The operators interviewed showed a positive understanding in their responsibility for their own safety and reporting any injuries.</p> <p>B. Rogers S. Kennelly</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
5. Does the occurrence reporting system trigger investigation of incidents and events that resulted, or could have resulted, in occupational injuries or death?	Yes. This is more fully reviewed in core requirement 8.12.		XX	
6. Do investigations identify probable causes and corrective actions to prevent recurrence of similar accidents? Are lessons learned from investigations documented and the information disseminated to facility personnel?	Yes. This was also more fully reviewed in core requirement 8.12.		XX	

Approach 5 A physical walk through of selected areas of the facility will be performed to observe actual work site conditions and practices to assess compliance with existing requirements, and the effectiveness of internal audits. As a minimum the following will be assessed: ...

Criteria 8 As a minimum Industrial Safety, Industrial Hygiene, and Nuclear Safety should have assessed the following respectively: ...

Criteria 10 Ladders, guard rails, and fall protection equipment are well maintained and meet applicable standards.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
WHC-CM-5-36, Ch. 1-10 SAFETY 29 CFR 1910 (OSHA)				

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>1. Are all compressed gas cylinders stored and handled in accordance with all applicable requirements?</p> <p>WHC-CM-5-36, Chapter 1-10, Section WKS 14; 29CFR1910.101; PGA-1</p>	N/A			
<p>2. Are all places of employment, passageways, storerooms, etc. kept clean, orderly, dry, and in a sanitary condition?</p> <p>Are permanent aisles and passageways marked, kept clear with no obstructions?</p> <p>Do floors used for storage have their safe maximum floor load posted?</p> <p>WHC-CM-5-36, Chapter 1-10, Section WKS 18</p>	<p>This is well done. A walkdown of the 2404 series buildings was very positive that these requirements are being met.</p> <p>G. Mickel B. Rogers</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>3. Is there a standard guard rail for open sided floors, walkway, platforms, wall openings or floor holes through which a person may walk? Do temporary floor openings have a standard rail as required?</p> <p>Is every stairway and ladderway floor opening guarded by a standard railing on all exposed sides except at access openings? Are toeboards provided at exposed ladderway sides? Are entrances protected by swinging gate, chain (of proper height and strength), or offset so that persons cannot walk directly into the opening?</p> <p>Is every open-sided floor or platform four feet or more above adjacent floor or ground level guarded by a standard guardrail on all open sides? Is the railing provided with a toeboard where falling materials may pose a hazard?</p> <p>WHC-CM-5-36, Chapter 1-10, Sections WKS 18, 19 Sections</p>	<p>The only concern of the operators is the fixed ladder that goes up the side of the buildings to the roof. It's under 20' high and meets minimum requirements for safety equipment, but the facility is planning on making it even better by possibly adding a safety cage to the outside of the ladder.</p> <p>G. Mickel B. Rogers S. Kennelly</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>4. Does every flight of stairs with 4 or more risers have a standard stair rail?</p> <p>Are all stairway treads reasonably slip-resistant and the nosings of non-slip finish?</p> <p>Is the vertical clearance above any stair tread on an overhead obstruction at least 7 feet from the edge of the tread?</p>	N/A			
<p>5. Do employees working with portable ladders know and follow established rules and safe practices for ladder use?</p> <p>Are all ladders maintained in good condition at all times?</p> <p>Are ladders' safety feet in place and in good condition?</p> <p>Are ladders inspected before each use?</p>	<p>Yes. All ladders observed in the facility were in good shape. Although the ladders are not used much, individuals showed that they knew the basic safety requirements for using the ladders.</p> <p>B. Rogers S. Kenneally</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>6. Are wooden ladders painted?</p> <p>Is a ladder ever used to gain access to a roof if it doesn't extend at least 3 feet?</p> <p>Do all metal, portable ladders have rungs/steps that are corrugated, knurled, dimpled, coated with slip resistant material to prevent possibility of slipping?</p>	<p>No wooden ladders were observed that were painted. all portable ladders observed met requirements.</p> <p>G. Mickel</p>			
<p>7. Is the clearance behind the ladder a minimum of 7" or are the rungs appropriately arranged for foot clearance?</p> <p>Is the step across distance for any fixed ladder greater than 12" or less than 2 1/2"?</p> <p>Are landing platforms a proper size and equipped with proper railings? Is there a rung of the ladder at the landing level?</p> <p>Do ladders have extensions or grab bars at least 3 1/2 feet above landing and of proper construction?</p>	<p>Yes. Also see comment to item 3 above.</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>8. Does storage of material create a hazard? ie. are items stored in tiers stacked, blocked, interlocked and limited in height so it is stable? (broken pallets)</p> <p>Are clearance limits posted? ie. fork lift speed limit signs, floor loading, shelving load limits</p>	<p>Yes. As storage is the main business of CWC all was well stored. No broken pallets or unstable loads were observed. Floor loading is well posted.</p> <p>G. Mickel B. Rogers</p>		XX	
<p>9. Are areas for battery charging/storage designated?</p> <p>Do battery charging/storage areas have facilities for flushing, and fire protection?</p> <p>Are spill and ventilation systems adequate for the battery storage/charging area?</p> <p>Are any ignition sources located in charging/storage area?</p>	N/A			

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>10. Does facility have any active working areas over 85 DBA?</p> <p>Are engineering and administrative controls used when noise levels exceed 85 DBA levels in a 8 hour time-weighted average (TWA)?</p> <p>If controls fail to bring levels < 85 DBA, is hearing protection provided and used?</p> <p>Does facility administer a hearing conservation program for areas with an action level of 85 DBA for an eight (8) hour TWA?</p> <p>What employees are in this h.c. program?</p>	N/A			
<p>11. Are signs and tags used to indicate danger, warn or caution?</p> <p>Are signs correct color for hazard level?</p> <p>Is equipment properly labeled for ease of understanding and immediate recognition of hazards?</p>	<p>yes. The facility has given a lot of thought into the sign postings as too many are found not to be effective. The signs that are visible are appropriate.</p> <p>B. Rogers G. Mickel</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>12. Do all personnel working in areas or assigned to tasks where a potential for eye and face injury exists wear eye protection that meets the requirements of ANSI Z87.1-1989, including side shields, cleanliness?</p> <p>Do managers ensure that visitors are provided with adequate eye protection before they are permitted to enter any area where eye protection is required, and that visitors are informed of the requirements for wearing eye protection in designated areas?</p>	<p>Very little is required in a storage facility operation. No specific eye protection areas were observed.</p>		XX	
<p>13. While performing physical work in an operating facility or job site, do employees wear sturdy protective clothing that covers their legs, trunks, and shoulders, unless the job hazards dictate more stringent protective measures?</p> <p>Do employees wear appropriate gloves for all work where there is reasonable risk of hand injury?</p>	<p>yes. All employees observed working in the facility had proper clothing including sturdy footwear.</p> <p>B. Rogers S. Kennelly</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>14. Are all employees who are exposed to hazards that may cause head injuries (falling or flying objects, electric shock, burns, work in areas with obstructions or protruding/low-hanging objects) provided with appropriate protective headgear per ANSI Z89.1.</p> <p>Is protective head wear worn only as designed (e.g., brim forward, straps fastened, etc.). Protective headgear shall not be not altered or painted.</p>	<p>Yes. When required proper head gear is worn, although it is not often required in the storage facility. B. Rogers G. Mickel</p>		XX	
<p>15. Is personal protective equipment modified without specific ISFP review and approval? Do employees wear personal protective equipment in accordance with training, procedures, and instructions?</p> <p>Is personal protective equipment maintained in an operable, clean, and sanitary condition?</p> <p>Is personal fall protection equipment well maintained, meets applicable requirements, and employees have received training and know how to use the equipment?</p>	<p>This is OK. Improvement needs to take place when responding to process upsets as reported in Core Requirements 8.1 and 9.</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
16. Are respirators properly cleaned, stored, inspected, and positively controlled per procedure? Do employees receive proper training prior to using respirators?	N/A		XX	
17. Are all tools and equipment (both company and employee-owned) used by employees at their work place in good condition?	Yes. The tools and forklifts observed were well maintained and used properly. There are not a lot of hand tools in the facility. G. Mickel B. Rogers		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>18. Is every exit clearly visible or the route to reach it conspicuously indicated?</p> <p>Is every exit, way of approach thereto, and way of travel from the exit into an open space continuously maintained free of all obstructions or impediments to full instant use? (blockage)</p> <p>Is the minimum width of all exits more than 28 inches? Are doors of the side-hinged, swinging types?</p> <p>Are there any furnishings, decorations or other objects placed that obstruct exits, access thereto, egress therefrom, or visibility thereof?</p> <p>Are all exits marked by a readily visible sign? Is access to exits marked</p>	<p>No problems in this area were observed. The emergency lights were found to be too low when the material is stacked in the buildings so they were raised. Otherwise the aisle widths are closely monitored and maintained.</p> <p>G. Mickel W. Hansen B. Rogers</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>19. Have all confined spaces at this facility been evaluated and classified as permit-required spaces or non-permit-required confined spaces?</p> <p>Are all permit-required confined spaces posted "DANGER, PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER"?</p> <p>Is a written and implemented confined-space entry program in place?</p>	See LOI 8.8-confined Space.		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>20. Are there effective measures in place to prevent unauthorized entry into confined spaces?</p> <p>Are acceptable entry conditions spelled out in the safe entry procedure?</p> <p>Are procedures and equipment (including phone numbers) to summon rescue and emergency services called out on the entry permit.</p> <p>Are communication procedures used by authorized entrants and safety attendants included in the entry permit?</p> <p>Is personal protective equipment, testing equipment, alarm systems, and rescue equipment identified in the entry permit?</p>	See item 19			

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>21. Are there suitable facilities for flushing the body and eyes if there is exposure to corrosive materials? Is the facility within the work area for immediate emergency use?</p> <p>Are routes to flushing facilities kept clear at all times?</p> <p>Are safety showers/eye washes checked as required? Is inspection documented (tagged)?</p> <p>Is the emergency shower location identified with a highly visible sign?</p>	N/A			

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>22. Is machine guarding provided where employees are exposed to nip points, rotating part, flying chips, or sparks?</p> <p>Are machines guarded properly when employee is exposed to point of operation?</p> <p>Are grinding wheels properly guarded, dressed, with proper clearances?</p> <p>Are horizontal and vertical belt drives within 7 feet of the floor properly guarded?</p> <p>Does machinery have an easily accessible emergency off button/switch?</p>	N/A			
<p>23. Are all lavatories functional, potable water lines disinfected and tested, back flow prevention devices functional, and water pressure adequate?</p>	<p>Yes. All appeared to be in order with back flow preventers identified and water pressure adequate.</p> <p>S. Kennelly G. Mickel</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
24. Are there any LASERs in the facility classified as class II-IV? Are the lasers identified in the Hazard baseline? Is proper eye protection provided for lasers?	N/A			

Approach 6 Employee interviews will be conducted to determine the extent of their knowledge regarding worker rights, such as Employee Concern program and access to information.

Approach 7 Review procedures and observe equipment for sampling, monitoring, and analyzing hazardous substances to ensure that provisions are in place to collect data for notification and reporting as directed by Federal and State requirements.

Criteria 7 A system exists and is utilized whereby employees may identify safety and health hazards to their manager for corrective action without fear of reprisal. Employees are aware of their access rights to information including medical and monitoring records and Material Safety Data Sheets.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
WHC-CM-5-36, Ch. 1-10 SAFETY 29 CFR 1910 (OSHA)				
1. Do individuals know the three ways to express their safety concerns? (directly to safety rep., directly to management, safety concern hotline)	Yes. The workers and individuals know of how to express their safety concerns and feel they are listened to. S. Kennelly B. Rogers		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
2. Do individuals know their worker rights including the employee concern program? Is this information included in the safety program? CM-5-36, Ch. 1-10, WKS 1	Yes. This is included in the program and employees are generally aware of their rights. G. Mickel B. Rogers		XX	
3. Are official employee bulletin boards in place and do they contain the master safety rules (poster 29404052.1) and Occupational Safety and Health Protection for DOE Contractor Employees at Government-Owned, Contractor-Operated Facilities (poster 79105063.1) CM-5-36, CH. 1-10, WKS 2, P. 3.2	Yes. The boards in M0720 were reviewed and found adequate.		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>4. Do employees receive information and training on hazardous chemicals in their work area?</p> <p>How does this program work?</p> <p>Is this information provided at the time of their initial assignment?</p> <p>Is it also done when a new hazard is introduced into their work area?</p> <p>(Interview some employees to determine if they know where their MSDS's are.</p> <p>See if employees know the hazards of the hazardous chemicals they are using.</p> <p>Did they know the hazards when they started working and also when a new hazard was introduced in their area?)</p> <p>Do employees know the location and availability of the written hazard communication program and the inventory lists of hazardous chemicals and the MSDS's?</p> <p>hazard</p>	<p>No problems observed in this area. See the LOI for the HAZ COM program.</p>		XX	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
<p>5. Do employees know the methods used to detect the presence or release of the hazardous chemical?</p> <p>Do employees know what measures they can take and have been provided for them to avoid the hazards in the work place such as PPE, work practices, emergency procedures?</p>	<p>YES. Although as reported in core requirement 8.1 and 9 the emergency preparedness program needs improvement prior to start up. The various warning devices in the buildings are understood.</p> <p>B. Rogers S. Kennelly</p>		XX	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT 8.10:

There exists an adequate configuration management program to assure necessary change and drawing control of plant structures, systems, and components and to assure changes are reflected in training, procedure development, maintenance instructions, and technical baseline.

APPROACH:

1. Review the configuration management program to determine the adequacy of facility interfaces required to maintain configuration management; proposed change review and approval; and drawing, procedure and training material configuration control.
2. Interview the responsible personnel for configuration management to assess the backlog of drawing changes, backlog of procedure changes, prioritization and action tracking scheme for facility changes, and the interfaces with maintenance, training, and operations personnel concerning impacts of new and revised drawings and procedures.
3. Confirm a program is in place and has been implemented requiring the physical walk down of systems to verify the accuracy of applicable design drawings/documentation and work plans.
4. Verify that the change control process has been adequately implemented and changes are adequately controlled.
5. Review a major change to the WRAP facilities/systems to establish that the change was properly analyzed, documented, reviewed, and incorporated.

CRITERIA:

1. Documents, drawings, and other references which define the facility configuration are readily available, authorized, properly controlled and are used in developing training material, preparing facility procedures, work plan preparation, etc.
2. Management ensures that changes to the facility are warranted and properly controlled.
3. The configuration of systems as contained on as-built drawings have been physically verified.

4. Procedures and management policies for changes to the facility are properly executed.
5. Configuration Management procedures/policy exists and are clearly communicated and understood by all levels of the organization.
6. Responsibilities and interfaces for configuration management are clearly defined.
7. An administrative program is in place to ensure that modifications are analyzed, documented, approved by appropriate personnel and organizations, and reflected in design drawings, new/revised procedures and training materials.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Check location of configuration control program.	Solid Waste Disposal (SWD) documents and manuals.	WHC-CM-5-34, 2.4, contains Configuration Management requirements along with WHC-CM-5-34, 2.1 for Configuration Change Control.	X	
2) Check Location Of Unreviewed Safety Question (USQ) process.	SWD documents/manuals.	WHC-CM-5-34, 1.24, contains the USQ procedure.	X	

<p>3) Evaluate understanding of configuration control and communication.</p>	<p>Discussion with Randy Ames.</p>	<p>Configuration Control for facility equipment requires the use of approved drawings. Drawing changes are controlled by use of the Engineering Change Notice (ECN) process. Current H-Series drawing status and outstanding ECNs can be determined by using Soft Reporting.</p> <p>Discussed the post-construction "as built" design drawing verification process:</p> <p>The field configuration was verified to be consistent with design drawings by a thorough facility walkdown conducted by Solid Waste Facility Engineering prior to releasing the drawings into the facility configuration management system.</p> <p>Greatly expanded electronic document access is now available with implementation of the Records Management Inventory System (RMIS).</p>	<p>X</p>	
<p>4) Evaluate understanding of configuration control and communication.</p>	<p>Discussion with Mat Irwin.</p>	<p>Followed up on Item 2.4.1.2 from Facility Evaluation Board (FEB) Report Dated March 20, 1997 (FEB-96-0006-SWM/TP):</p> <p>USQ records have been verified as complete. All original screenings and evaluations listed in the Unreviewed Safety Question log are now available. USQ notebooks are arranged by year, numbered sequentially, and stored in a fire proof cabinet.</p>	<p>X</p>	

<p>5) Evaluate understanding of configuration control and communication.</p>	<p>Discussion with Jan Van Slyke.</p>	<p>Noted the configuration control and change process for Plant Operations Procedures as a 'Good Practice'. All current Plant Operations Procedures (POPs) and all associated illustrations and figures are available electronically on a shared drive. Changes to POPs are initiated and authorized using a Document Change Request (DCR) form. Draft procedure changes are routed for review and approval using a Document Acceptance Review Form (DARF). Procedures with changes in-process are all indexed on a master status tracking list. This status list is available (read only) to all employees electronically and includes the responsible individual currently assigned a review/comment action. Once a POP revision has been approved, the electronic version of the new/revised procedure is made available on the shared drive. A hard copy listing of all current controlled POPs is printed daily for quick procedure control reference (this list is also available on the shared drive). An entire hard copy set of all the current POPs is maintained for use in the event that the network is down. A revision history of procedure changes, including the entire electronic versions of all previous procedure revisions, is available for the past two (2) years.</p>	<p>X</p>	
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<p>6) Evaluate understanding of configuration control and communication.</p>	<p>Discussion with Jeff Carlson.</p>	<p>Training receives notification of in-process and completed POP changes to assist in maintaining training materials current. Training also receives copies of applicable ECNs. A thorough job/task analysis, that began in the fall of 1996, was just completed in March, 1997. This analysis used the talents of trainers, operations supervision, and operators to generate a list of tasks based on current procedures and operator input. This task list forms the basis for upgrading the operator certification packages. Initial and continuing operator certification and training will be completely updated and documented, based on current procedural tasks and operational practices, by September of this year. [As an aside, CWC has only senior operators on staff - the newest operator came to CWC in 1991.] The training program has made great progress in addressing the deficiencies noted in the Facility Evaluation Board (FEB) Report Dated March 20, 1997 (FEB-96-0006-SWM/TP).</p>	<p>X</p>	
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7) Evaluate understanding of configuration control and communication.	Discussion with Nancie Daniel.	WHC-CM-5-34, Section 2.1, 'Configuration Change Control', directs the use of the Waste Remediation Tracking System (WRTS) for tracking commitments placed on the SWD organization from internal and external sources. However, SWD commitment tracking has been completely transferred from WRTS to the Hanford Action Tracking System (HATS) as of January 31, 1997. This is really just an acronym (semantics) discrepancy that will be corrected when the new Waste Management Operations Manuals are issued in June, 1997. Though WRTS and HATS are different tracking systems, action tracking is the procedural intent, not which program is used. All entries to HATS go through the same individual(s) that were responsible for entry into WRTS so the entry process is transparent to CWC personnel. Also, CWC personnel still receive action items, but now they are printed out by the HATS data base.	X	
8) Evaluate understanding of configuration control and communication.	Discussion with Gerry Whitney.	All new Work Plans must be verified by field walkdowns. Walkdowns are usually performed by the cognizant engineer and operations personnel. The associated Document Acceptance Review Form (DARF) must be signed off before the Work Plan will be issued. Discussed a Work Plan to change the filter configuration at the Alpha Caissons that was extensively reworked as the result of differences discovered during the field walkdown as an illustration of the verification process in action.	X	

Verify that the DOE Authorization Basis Approval Letter and Safety Evaluation Report (SER) have been incorporated properly into the released revision of the ISB as required by DOE letter 97-SWT-047.	HNFS-SD-WM-ISB-007, Rev 1	Verified that HNF-SD-WM-ISB-007, Central Waste Complex Interim Safety Basis, Appendix H, incorporates the Safety Evaluation Report (SER) as required.	X	
Test that operating procedures and the approved Interim Safety Basis (ISB) are compatible and that the necessary controls and limits have been included by examining an applicable operating procedure.	SW-100-110, Rev F-0 & F-1	Reviewed the documentation trail for the two (2) most recent revisions of SW-100-110, Receive Radioactive Solid Waste at the Central Waste Complex, (Rev/Mods F-0 & F-1). Found that DCRs #130, #72, and #44 had been incorporated correctly.	X	

PHASE V STORAGE ORR APPRAISAL FORM

Management 8.11.1 (Records Management)

CORE REQUIREMENT: An adequate records management/document control program exists to assure that all important documents, records, and related information are maintained current and readily retrievable.

APPROACH: 1. Review the program and procedures which define the records management system.

- CRITERIA:**
1. The records management program defines responsibilities for determining what documents will be controlled in a system; methods used for acquisition, identification, storage, retention, and retrieval of documents; and controls to be exercised for changes, distribution, and removal.
 2. The records management program scope includes receipt or preparation, review and approval, and distribution of documents generated externally and internally in a timely manner.
 3. The records management program includes processes, interfaces and responsibilities for controlling design bases and technical documents, such as calculations, specifications, drawings, vendor manuals, records of maintenance, test results, etc.
 5. The document control program assures that uncontrolled drawings, manuals, and procedures are not used at the work location.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Review the program and procedures which define the records management system for the attributes listed in the above criteria.	Reviewed the Solid Waste Administration Manual sections 1.13,2.11,1.1,1.24.2.1, 2.4	No single administrative procedure covers Records Management as a program. Record Management is dispersed through many sections of 5-34. The following reviews of current practices are sectioned into Operations, Engineering and Maintenance.		X

a. Content Doc. Control Change Control	Operations: Jan Van Slyke Maintenance: Pat Bott, Beth Wright, Barb Robinson Engineering: Wil Hansen, Ed Dosramos, Randy Ames	Operations: Procedure changes are controlled, tracked and implemented in a very structured process. Field input, engineering requirements for systems, and the validation/walkdown are all retained in a file. The procedure is available electronically, but controlled by a single individual. Engineering: The engineering documents are controlled per procedure and retained per the EDT process. Maintenance: follows the JCS process per section 2.11 with work package retained and retrievable through RIDS	X	
			X	
			X	
b. Timeliness	same as above	The current processes used for records management met the timeliness needs of the user organization.	X	
c. Design Bases	Engineering	design basis documents are being managed per 5-34 and 5-36 procedures.	X	
d. Only Controlled Docs.	All	Quality effecting documents are appropriately identified as are specific guidance memoranda issued by management. Logs used by both engineering and operations were being utilized and controlled correctly.	X	
2)				

PHASE V STORAGE ORR APPRAISAL FORM

Management 8.11.2 (Records Management)

CORE REQUIREMENT: An adequate records management/document control program exists to assure that all important documents, records, and related information are maintained current and readily retrievable.

APPROACH: 2. Review records management program and implementing procedures in engineering, maintenance, operations, and materials management to ensure responsibilities and processes are documented for controlling technical documentation. Sample the efficiency of the system by selecting one system important to safe operations and requesting documents associated with design, procurement, construction, maintenance, and operability of one or two significant pieces of equipment in that system. Interview selected facility management to assure they are knowledgeable of records management and retention policies and procedures.

- CRITERIA:**
1. The records management program defines responsibilities for determining what documents will be controlled in a system; methods used for acquisition, identification, storage, retention, and retrieval of documents; and controls to be exercised for changes, distribution, and removal.
 2. The records management program scope includes receipt or preparation, review and approval, and distribution of documents generated externally and internally in a timely manner.
 3. The records management program includes processes, interfaces and responsibilities for controlling design bases and technical documents, such as calculations, specifications, drawings, vendor manuals, records of maintenance, test results, etc.
 4. Necessary documents are kept current and legible and are either available at appropriate plant locations or can be provided in a timely manner.
 5. The document control program assures that uncontrolled drawings, manuals, and procedures are not used at the work location.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO

1) Review records management program and implementing procedures in engineering, maintenance, operations, and materials management. Ensure responsibilities and processes are documented for controlling technical documentation.	Engineering: 5-34 1.24,2.1,2.4 and 5-36 6.1,6.2 Maintenance:5-34 2.11 Operations: 5-36 3.5 section 12.5	All organizations implement the procedural requirements of 5-34 and 5-36.	X	
2) Select one system important to safe operations. Request documents associated with design, procurement, construction, maintenance, and operability of one or two significant pieces of equipment in that system. Verify that the requested documents can be retrieved quickly and reliably.	Pat Bott-HVAC for 2404	Reviewed the incorporation of the HVAC system for 2404 facilities for proper inclusion of operating limits per the ISB, operation and maintenance per CVI data, and knowledge of personnel. All aspects of this core requirement were met.	X	
3) Interview managers responsible for the records management system.	Paul Crane, Susan Stitt, Matt Irwin			

What procedures and policies define the records management and document control systems?	WHC-5-34 and WHC-CM-5-36	The Solid Waste Administration Manual does not define a specific records management program. Each organization (Engr, Ops, Maint) follow separate procedures for control of documents. All respond accordingly but an organized records management program would provide better efficiency.	X	
What components are vital to an accurate and smoothly functioning records management system?		This could not be addressed		x
Describe the requirements for document retention.	same as above	This varied. Ops is two years, maintenance sends to RIDs for permanent storage but is retrievable, and Engineering uses the EDT process which is also retrievable.	x	
What actions are required if a controlled document is "lost?"		Each organization responds differently, but each also know how to retrieve.	X	

PHASE V STORAGE ORR APPRAISAL FORM

Management 8.11.3 (Records Management)

- CORE REQUIREMENT:** An adequate records management/document control program exists to assure that all important documents, records, and related information are maintained current and readily retrievable.
- APPROACH:** 3. Observe work in process involving structures, systems, and/or components, note any use of uncontrolled drawings, procedures, or manuals.
- CRITERIA:** 5. The document control program assures that uncontrolled drawings, manuals, and procedures are not used at the work location.
6. Documentation is stored correctly (e.g., fire proof cabinets for QA records).

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Observe work in process.	R Robins, B Rogers, S Kennelly, J Van Slyke: Log books, change requests, weekly and monthly surveillances sheets.	Operations has a very credible system that enables them to create, store, and retrieve documents in accordance with regulations. The Fire Systems generates and retains all it's own records and was not reviewed in detail.	X	
Only controlled documents in use?	S Kennelly, B Rogers, R Robins	Records for the fire systems are not readily retrievable by the operating facility. Both operations and maintenance were using controlled documents.	X	

Correct revision in use?	Field walk through, D Brotherton, J Van Slyke	There were inconsistencies found on fire suppression field documentation and labeling. The operating procedures are well controlled with only computer generated revisions available in the field.	X	X
Uncontrolled copies of controlled documents available?	J Van Slyke, D Brotherton, B Rogers, M Aichele	There were no uncontrolled copies of controlled documents available.	X	
2) Storage requirements met?	R Robbins, J Van Slyke, B Rogers	All record storage requirements were met by the facility. The daily operating logs are well protected and being stored in a fire proof safe. There are provisions in place to recreate logs that have not been scanned, lost. However they are not proceduralized.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: There exists an occurrence reporting/root cause program.

APPROACH:

1. Knowledgeable and independent (if available) personnel conduct investigations.
5. Ensure that assessment teams are supplemented with special expertise (if required) to assist in the occurrence investigation. Through discussion with cognizant personnel, determine where outside special expertise was required.

CRITERIA:

1. An occurrence reporting program is established which ensures that sufficient personnel are trained in root cause analysis techniques and are available.
2. The program shall ensure that those conducting investigations are independent of the cause of the unusual event.
3. The "lessons learned" which are developed as a result of the program implementation and root cause analysis shall be incorporated into the corrective action system to prevent recurrence.
4. The program should contain provisions to call in personnel with special expertise to assist in the occurrence investigation.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Core rqmt. 8.12	OR RL-PHMC-SOLIDWASTE-1997-0002, OR RL-PHMC-SOLID WASTE-1996-0002 FM - Robert Giroir OPN - Paul Crane OPN - Michael Aichele OPN - Jim Mitchell ENV - Kent McDonald RC - Brad Brannan ENG - Mat Irwin	There is an Occurrence Reporting Program & procedure. Procedure is in WHC-CM-5-34 section 1.18. Charles Davis has responsibility to prepare OR document. Independence on the investigations is achieved by QA, Rad Con, Ind. Safety, Ind. Hygiene, and others with special expertise called in on an as needed basis. Several Occurrence Reports were reviewed. Most pertinent are shown in the previous column. Root Cause has been determined and critiques have been held. There were several others involving issues such as tumbleweed contamination. The process appears to be working well.	X	

RFSH PROJECT W-112 OPERATIONAL
READINESS REVIEW
EMERGENCY OPERATIONS DRILL PROGRAM
CORE REQUIREMENT 9.0

CORE REQUIREMENT: 9.0 A routine and emergency operations drill program, including program records, has been established and implemented.

CRITERIA:

9.1 The drill program adequately plans, schedules, prepares, conducts, critiques, and documents drills.

APPROACH: 1, 2, 3, 4, 5

KEY:

- * 1= HNF-SD-WM-ISB-007, CWC Safety Basis.
- * 2= WHC-SD-PRP-HA-010, Solid Waste Burial Ground/Central Waste Complex Hazard Assessment.
- * 3= HFN-IP-0263-CWC, BEP for CWC.
- * 4= HNF-PR-000424, Maintaining Facility Emergency Preparedness.
- * 5= DOE-0223, Emergency Plan Implementing Procedure.
- * 6= WHC-IP-GEN, Guidance and format for Building Emergency Plans.
- * 7= WHC-IP-1018, Emergency Prep Program Plan.
- * 8= WHC-CM-5-34, 1.5 Emergency/Operational Drill Program.

CRITERIA	REFERENCE DOCUMENTS	ASSESSMENT	ACTION ITEMS
9.1.1 A program is established and implemented for the planning, scheduling, preparation, conduct, control, critique, and documentation of facility drills associated with emergency response. [DOE 5500.3A, Section 11.c.(12)(c); DOE/RL-94-02]	* 4 * 8 Charles Davis Paul Crane	Items addressed in WHC-CM-5-34, 1.5 Emergency/Operational Drill Program.	Meets Criteria. No Action Required.

9.1.2 Facility emergency drills are held in accordance with the schedule coordinated with the Site Emergency Management organization. The drills are of a scope and frequency to ensure response capability in all areas applicable to the facility. [DOE 5500.3A, Section 11.c.(12)(c); DOE/RL-94-02]	* 4 * 8 Charles Davis Paul Crane	Items addressed in WHC-CM-5-34, 1.5 Emergency/Operational Drill Program.	Meets Criteria No Action Required.
9.1.3 A Pre-Drill Report is submitted at least two weeks before the drill and a Post-Drill Report is submitted within two weeks after completion of the drill. [DOE/RL-94-02]	* 4 Charles Davis	March Drill (Post Drill) was not submitted within the two weeks.	Submit drills and schedule drills. On schedule.

<p>9.1.4 Facility emergency drills include simulated events to test response to radiological and hazardous material monitoring (spills, airborne releases, sampling, etc.), fires, loss of vital equipment, facility evacuation and accountability, and security emergencies. [DOE 5500.3A, Section 11.c.(12)(c)]</p> <p>NOTE: Facilities staffed at all times conduct at least one of the following drills for each shift crew:</p> <ul style="list-style-type: none"> a. fire, evacuation, take cover at 1 per year. b. security, loss of utilities, hazardous material, contamination spread, and criticality at one per year for each type in facilities where there is a credible potential for the emergency. c. seismic at one per year (Plutonium Finishing Plant only). d. bomb threat at one per year in hazardous facilities with bomb threat emergency action levels. <p>With concurrence of the area Site Emergency Management representative,</p>	<p>* 8</p> <p>Charles Davis Paul Crane</p>	<p>The Facility has submitted and approved a FY97 drill schedule.</p>	<p>Meets Criteria. No Action Required.</p>
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9.1.5 Simulated response during facility drills is minimized. Wherever possible, the indications from and the response to the simulated event are the same as if the event were real. [DOE 5500.3A, Section 11.c.(12)(d)]	* 8 Charles Davis Paul Crane	Drills are not currently to this level of effort. See attached items.	See Attached items.
9.1.6 Every drill has a formal critique with all players, controllers, and evaluators and the results are documented. [DOE 5500.3A, Section 11.c.(12)(b)(6); DOE/RL-94-02]	* 8 Charles Davis Paul Crane	A Post Drill Critique is performed as per drill performed for the ORR Team 5/14/97 and previous drills.	Meets Criteria.
9.1.7 A system of deficiency identification, evaluation, analysis, and follow-up is established to ensure weaknesses and deficiencies are corrected. [DOE 5500.3A, Section 11.c.(12)(e); DOE/RL-94-02]	* 8 Charles Davis Paul Crane	Less than adequate critique items are placed on HATS. Observation of Post Drill Critique indicate repetitive problems example- Reorder, Communicator to IC, Radiological Work Practices etc.	Implement a SWM required reading/ all Personnel Meeting etc. To disseminate less than adequate practices to all personnel.

PHASE V STORAGE ORR APPRAISAL FORM

Management 11.1

CORE REQUIREMENT: Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management responsible for control of safety.

APPROACH: Obtain organization charts, position descriptions, and procedures to establish that there exists, for individuals and departments, clear definitions and bounds of authority, accountability, responsibilities, and reporting relationships.

CRITERIA:

1. Policies/procedures exist defining the responsibility, authority, accountability, and reporting relationships of each management position, exempt position, non-exempt position, bargaining unit, and direct support personnel (e.g., Environmental Compliance, Fire Protection, Engineering, Maintenance, QA, Health Physics, Training, Industrial Hygienist, Industrial Safety, Nuclear Safety, Laboratories, Security, Records Management, Projects, Occurrence Reporting, Emergency Preparedness, etc.).
3. Department interface and bounds are clearly defined and understood.
4. Support group interface and bounds are clearly defined and understood.
5. Oversight interface and bounds are clearly defined and understood.
10. An adequate program exists for dissemination of general information to employees regarding the facility.
11. Position descriptions are available.
12. Subcontractors understand their reporting relationships and responsibilities. Subcontractor interface and bounds are defined and understood.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	Acceptable	
			YES	NO
1) Obtain organization charts, position descriptions, and procedures. Establish that there exists, for individuals and departments, clear definitions and bounds of authority, accountability, responsibilities, and reporting relationships.	Organization Chart Training Record Files CM-5-34, Section 3.5, Rev. 2	Determined clear lines of authority exist. Functional Department boundaries are clearly defined. Management is responsible for safety. Position descriptions are available.	X	
2)				

PHASE V STORAGE ORR APPRAISAL FORM

Management 11.2

CORE REQUIREMENT: Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management responsible for control of safety.

APPROACH:

2. Interview facility personnel to determine the adequacy of collateral duties, contractor/subcontractor interfaces and accountability, delegation practices, management attitude and practices which foster or hinder cooperation and teamwork, effectiveness of information flow (timeliness, adequacy, emphasis on safety and environmental protection).
3. Interview managers to ensure there exists adequate access to DOE, regulators, and emergency organizations on matters of safety and environmental protection.

CRITERIA:

2. All personnel associated with the facility understand and implement their responsibilities, authority, accountability and reporting relationships.
3. Department interface and bounds are clearly defined and understood.
4. Support group interface and bounds are clearly defined and understood.
5. Oversight interface and bounds are clearly defined and understood.
6. Managers have appropriate access to DOE, regulators, and emergency organizations on matters of safety and environmental protection.
7. Line organizations are unencumbered by excessive duties or significant duties unrelated to the day-to-day operation.
8. Managers encourage and effectively foster teamwork and cooperation among interfacing organizations.
9. Directives and other management information flow quickly and accurately through the management chain and other formal channels of communication.

12. Subcontractors understand their reporting relationships and responsibilities. Subcontractor interface and bounds are defined and understood.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	ACCEPTABLE	
			YES	NO
1) Interview facility personnel to determine the adequacy of collateral duties, contractor/ subcontractor interfaces and accountability, delegation practices, management attitude and practices which foster or hinder cooperation and teamwork, effectiveness of information flow (timeliness, adequacy, emphasis on safety and environmental protection).	Interviews conducted: G. Mickle R. Robbins R. Whitlock J. Mitchell D. Pyzel S. Stitt	Determined that personnel understood how their assignment contributed to safety within CWC. Information flow within the organization is satisfactory and timely--personnel generally felt well-informed. Management attitudes and practices foster cooperation and team work. Departmental interfaces work well.	X	
Describe your primary responsibilities.	"	N/A	X	
Describe how these responsibilities sustain or improve safety in the operations taking place.	"	Personnel interviewed understood how they fit into overall safety of the facility.	X	
How do contractor/ subcontractor interfaces and accountability affect a safe working environment?	"	Discussions centered around accountability for safety.	X	
Describe how delegating work to others affects your ability to work safely.	"	N/A		
How do management attitudes and practices foster or hinder cooperation and teamwork in the CWC?	"	Management is encouraging, fosters teamwork. Positive, keeps things in perspective. Teamwork, rotating assignments. Good cooperation. Help establish priorities	X	
Is the flow of information effective (is it timely, is it adequate, does it help or hinder personnel safety and environmental protection)?	"	Within a Subcontractor organization -- good. FDH and DOE down to Sub organizations -- not as good. The flow helps work performance.	X	

2) Interview managers to ensure there exists adequate access to DOE, regulators, and emergency organizations on matters of safety and environmental protection.	Interviews conducted: G. Mickle R. Robbins R. Whitlock J. Mitchell D. Pyzel S. Stitt	Where required, access is available through appropriate technical specialists and Managers.	X	
What is your role and responsibility in ensuring a safe working environment?	"	Personnel interviewed were able to describe their role and responsibility in ensuring a safe working environment.	X	
How can operations in the CWC affect environmental protection?	"	Personnel interviewed could describe the potential negative impact of CWC operations on the environment.	X	
What is your path for obtaining assistance or information from DOE, regulators, and Site emergency organizations?	"	Path for obtaining assistance is understood.	X	
Do you receive adequate assistance from DOE and Site emergency organizations?	"	When required, assistance is satisfactory.	X	

Core Requirement 12.0 The implementation status for DOE Order 5480.19, conduct of operations requirements for DOE facilities, is adequate for operations.

WHC-CM-5-34, Sec. 3.0, 3.7, Shift Routine and Operating Practices

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5.34, SECTION 3.7 CM-5.36, SECTION 5.36 DOE ORDER 5480.19				
1. Are operator rounds periodically monitored by supervisory personnel to ensure that comprehensive tours continue to be conducted? 5480.19, Chapter II, C.4	5-34, Section 3.7, para. 4.6 requires shift manager/team leader perform this surveillance monthly and log in Facility logbook. Interviewed Team Leader, Mike Aichele Discussed with Operations Manager, Paul Crane	The Team Leader for CWC indicated he was not aware of this requirement nor was he performing the logging action. However, he did work in the field with the operators each day and considered the surveillance was being performed.		X
2. Are alarm light bulbs & annunciators checked at least once per shift. Are alternate inspection schedules approved by the Operations Supervisor or Manager? 5480.19, Chapter II, C.3	Included in 5-34, Section 3.7, para. 4.5 Surveillance Operator Bruce Rogers. Alarm lights are not specifically called out on round sheets. However, operators check all panels for alarms. In CWC, alarms are fire protection and alarm at the Fire Station.	No deficiencies noted	X	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
3. Are tours by operations personnel of sufficient detail to ensure that the status of equipment is known? 5480.19, Chapter II, C.3	Included in 5-34, Section 3.7 para. 4.5 Tour with surveillance operator B Rogers on 5/12/97	The surveillance sheets for the CWC procedure provide sufficient detail to ensure the status of equipment. However, some deficiencies related to fire systems have been outstanding for several months. Specifically, -One fire system valve position indicator has been noted as being inoperative for _____ months. -Some PIVs are not labeled		
4. Do data sheets include maximum/minimum values for equipment parameters? 5480.19, Chapter II, C.4	Included in 5-34, Section 3.7, para. 4.6 Surveillance sheets for the CWC 043 procedure	Surveillance sheets include max and min values for equipment parameters.	X	
5. Are parameters outside specified maximum/minimum red circled, reported to operations team leader, and noted in the narrative section or reference made to the explanation in the facility log book? 5480.19, Chapter II, C.4	Included in 5-34, Section 3.7, para. 4.6 Mike Aichele - Team Leader Bruce Rogers - Operator Steve Kennelly - Operator Paul Crane - Operations Manager	Operators do not red circle out of specification parameters as required by the 5-34 Manual. However, they do report out of spec readings to the Ops Team Leader and the out of specification condition is logged in the facility log book. The Operations Manager indicated action would be taken to have operators red circle out of specification parameters.		X
6. Are security keys controlled by the responsible facility manager/team leader?	Included in 5-34, Section 3.7, para. 4.10 Mike Aichele	Operators and team leaders have keys to the CWC buildings and they are controlled.	X	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
7. Does the facility operating base contain current copies of IOSRs, Operating Procedures and the Emergency Plan? 5480.19, Chapter II, C.10	Included in 5-34, Section 3.7, para. 4.12 requires IOSRs, 5-36, Chapters 1-10, 4-40, 5-34 and BEP. Mike Aichele - Team Leader	The facility operating base in MO-720 has the required documents. Supporting documents are also readily available in MO-720.	X	
8. Are log errors corrected properly?	Included in CM-5-34 Section 3.7, para. 4.17 Reviewed facility narrative log and operator round sheets.	Log maintenance practices meet an acceptable standard. The format of the Facility Logbook in MO-288 makes it very easy to follow during review.	X	
9. Are drawings used for operational decisions current and contain the letters "FV"?	Included in CM-5-34 Section 3.7, para. 4.18 Mike Aichele - Team Leader Jim Mitchell - Engineer	Operations does not maintain drawings at their control centers and instead relies on engineering to maintain drawings up to date and request support when needed. Operations at the CWC are not facility drawing dependent; therefore, relying on engineering for drawings is considered acceptable.	X	
10. Are daily surveillance tour deficiencies followed up for corrective action?	Included in CM-5-34 Section 3.7, para. 4.6 Observation of Surveillance rounds	Items are tracked and worked using an Open Item list. Some items have been open for a significant amount of time (several months).	X	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
12. Are surveillance data sheets being used on the daily tours maintained up to date?	Surveillance sheets are printed directly from the I drive each Monday for the week. This ensures the most recent copies are used. Mike Aichele - Team Leader Bruce Rogers - Operator	Surveillance sheets in use on 5/12/97 were the most recent version. Maintenance of procedures through the I drive is an excellent cost saving practice and ensures personnel have the most recent revision.	X	
13. Are housekeeping deficiencies noted on surveillance tours?	Included in CM-5-34 Section 3.7, para. 4.5 Operator round sheets and actual operator tours.	Round sheets do require housekeeping checks and the operator (Bruce Rogers) was very conscientious in this regard.	X	

3.9, Communication

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.9 DOE Order 5480.19				
1. Are communications conducted in a professional manner?	Included in CM-5-34 Section 3.9, para. 4.1.2 Observed shift briefing on 5/12/97.	Communications by the Team Leader were clear. A status board is used for job assignment which provides the communications operator (scribe) with a listing of who is doing what work. No deficiencies noted.	X	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
2. Are "repeat backs" given when remote communication instructions involve the operation of system equipment? 5480.19, Chapter III, C.6	Included in CM-5-34 Section 3.9, para. 5.1.13 No specific equipment operating instructions were observed for this review.	Not Observed	NA	NA
3. Are methods in place to ensure facility personnel are promptly alerted to facility emergencies? 5480.19, Chapter IV, C.1	Included in CM-5-34 Section 3.9, para. 5.3 Mike Aichele - Team Leader Steve Kennelly - Operator Bruce Rogers - Operator	General announcing, radios and beepers are available and used for notifications of problems. However, these are often not functional within the metal buildings. The CWC Team Leader indicated the general announcing circuit was being deactivated because it was not very good and expensive to maintain. The 200 West emergency sirens are operational. However, it is questionable as to whether or not they could be heard inside the buildings with a forklift operating and the doors closed. Throughout the review, the Scribe had difficulty with communications utilizing radios, pagers, and phones within the buildings. It is the teams suggestion that Solid Waste research obtaining repeaters and their own channel for the radios. (Note: To save money Purex may have some excess equipment that can be used.)		X

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
4. Does communications equipment support efficient communications? 5480.19, Chapter III, C.4	Same as above	Same as above		X

WHC-CM-5-34, Sec. 3.0, 3.10, On the Job Training
(Covered under core requirements 2 & 3)

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.10 CM-5-36, Chapter 2.15 DOE Order 5480.19 DOE Order 5480.20				
1. Are target dates for trainees to reach milestones and complete training assigned?	Included in CM-5-34 Section 3.1, para. 4.2 Mike Aichele - Team Leader Actions for training in this area were reviewed under core requirement 2	OJT was reviewed under core requirement 2. However, interviews with the Team Leader found he was knowledgeable of OJT training requirements.		
2. Is OJT conducted by individuals qualified in the operation of the facility with the appropriate OJT instructor training requirements completed?	Included in CM-5-34 Section 3.10, para. 5.2 Actions for training in this area were covered under reviews for core requirement 2	Not Observed		

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
3. Does OJT include the following four elements? Objective, Standards, Evaluation, Documentation.	Included in CM-5-34 Section 3.10, para. 5.8 Actions for training in this area were reviewed under core requirement 2.	Not Observed		

WHC-CM-5-34, Sec. 3.0, 3.13, Control of Equipment and system Status

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.13 DOE Order 5480.19				
1. Are changes in the status of facility equipment and systems documented in the Facility Logbooks?	Included in CM-5-34, Section 3.13, 4.1 Mike Aichele - Team Leader Steve Kennelly - Operator Reviewed facility logbook in MO-288 for the months of April and May.	The facility logbook provides a record of facility operations and status changes.	X	
2. At the beginning of each day shift, do Facility Logbooks reflect initial facility conditions?	Included in CM-5-34, Section 3.13, 4.3 Reviewed facility operations log in MO-288 for the months of April and May.	The facility logbook adequately describes facility conditions at the beginning of each day.	X	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
3. Is equipment tested after maintenance to demonstrate it is capable of performing the intended function?	Included in CM-5-34, Section 3.13, 4.6 Facility Logbook in MO-288 Reviewed 20 closed work packages for post-maintenance testing.	Completion of maintenance actions are recorded in the facility log. However, there was no record of retest. Based on the entries none of the items suggested a retest was required. Based on the information available for this review, most work in the facilities is preventive maintenance with no retest required. The preventive maintenance work packages do have equipment return to service requirements.	X	
4. Is alarm status noted in Facility Logbooks?	Included in CM-5-34, Section 3.13, 4.7 Facility Logbook in MO-288 Facility tour on 5/14/97	No locked in alarms were noted during this review; however, the facility logbook did include entries for receipt and clearing of alarms.	X	

WHC-CM-5-34, Sec. 3.0, 3.14, Lockout and Tagout

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
WHC-CM-5.34 section 3.14 WHC-CM-5-36, CM 1-10, WKS 8.1 DOE Order 5480.19				

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1. Are primary & alternate Lock and Tag Administrators designated in writing? CM-5-34(3.14/4.0.1)	Beth Wright - Backup L&T Admin Brad Graff - Electrical Cog Rich Clinton - CWC Cog Section 3.14 of the 5-34 Manual directed the use of Waste Management Operations Administration procedure RFSH-200	The Lock and Tag logbook includes a listing of L&T Administrators. Personnel contacted were not familiar with the RFSH 200 procedure and were not using this as the controlling document for L & T operations. They instead were using WHC-CM-1-5, Section 9.1 as the controlling procedure. These procedures are the same in content.	X	
2. Have employees completed Lock/tag training? CM-5-34(3.14/4.1)	Training records	Records indicate personnel have been trained on the new sitewide lock and tag procedure.	X	
3. Are safe condition checks approved by a technical reviewer and the administrator? CM-5-34(3.14/5.2)	Reviewed 20 completed work packages and there was no evidence of this action. However, there is no specific requirement for this since section 3.14 was canceled.	Work packages that required locks and tags included copies of tagout sheets which indicated safe condition checks were performed.	X	

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
4. Are technical reviews performed by cognizant engineers, using approved sketches or drawings showing the lockout points? CM-5-34(3.14/5.3)	Brad Graff - Electrical Cog Rich Clinton - CWC Cog Interviews of cognizant engineers indicated this was the standard practice as well as field walkdowns.	<p>Reviews of the RFSH-200 procedure found it does not specify how and where the authorized worker's lockout/tagout is applied as required by DOE-RL-SOD-INST-L&T.001 Rev 1, Section 4.1 nor are there CWC specific procedures which include this requirement.</p> <p>Interviews with personnel found discrepancies in awareness of responsibility for ensuring the 8 criteria for using an Authorized Worker's lockout/tagout by itself. -One cognizant engineer indicated it was his responsibility. However, could not explain how the determination was made on whether or not there had been previous accidents related to unexpected activation or re-energization of the machine or equipment. -One cognizant engineer indicated he had made the determination on whether or not an authorized worker's lockout/tagout could be used by itself based on a conversation with the PIC rather than by drawing or document review.</p>		X

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
5. Are active tagout authorizations surveyed monthly? CM-5-34(3.14/5.9)	Beth Wright L&T logbook for CWC	Only one active tagout existed in the L&T logbook. It had not been in place long enough for a surveillance. Not Observed		
8. Are Lock & Tag surveillance deficiencies documented & tracked to closure? (Waste Remediation Tracking System) CM-5-34(3.14/5.10)	Not reviewed	No deficiencies were available for review		
9. Are safe condition checks properly documented?	Reviewed 20 closed work packages.	Only 2 work packages required L & T and the safe condition checks were adequately documented. No work on the daily release sheet required lock and tag.	X	

WHC-CM-5-34, Sec. 3.0, 3.15, Independent Verification

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.15 CM-5-36, Chapter 1-3 DOE Order 5480.19				
1. Are independent verifications conducted separately and properly?	Included in CM-5-34, Section 3.15, 5.3	The administrative requirements are in place for independent verification. However, no independent verifications were required or observed during this review.		

WHC-CM-5-34, Sec. 3.0, 3.16, Alarm Management

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.16 CM-5-34, Section 2.11 CM-1-5, Section 1.1 DOE Order 5480.19				
1. Are non-active alarms labeled?	Included in CM-5-34, Section 3.16, 5.0.1 Observation of Surveillance rounds	The 2403 series buildings have non-active CAM alarms which are not labelled.		X
2. Do active alarms have a plant operating procedure?	Included in CM-5-34, Section 3.16, 5.0.2 Reviewed alarm response procedures	Active alarm response procedures are included in SW-001-330 and SW-150-003 These procedures have been updated for the 2404 buildings.	X	
3. Is receipt of alarms documented in the Facility Logbooks?	Included in CM-5-34, Section 3.16, 5.0.3 Facility Logbook in MO-288	Alarms receipt and clearing is logged in the facility logbook at MO-288.	X	
4. Do failed alarms have alternate methods established for monitoring required parameters?	Included in CM-5-34, Section 3.16, 6.4 Reviewed facility logbook in M)-288 and toured facility.	No failed alarms were noted during this review. Not Observed		

WHC-CM-5-34, Sec. 3.0, 3.17, Logkeeping

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO

CM-5-34, Section 3.17 CM-5-36, Chapter 3-5 DOE Order 5480.19				
1. Is a Narrative Logbook maintained?	Included in CM-5-34, Section 3.17, 5.0 Reviewed logbook in MO-288 and interviewed Mike Aichele and Steve Kennelly.	A Facility Logbook is maintained in MO-288.	X	
2. Are entries in the Narrative Logbook clear, concise, complete and legible?	Included in CM-5-34, Section 3.17, 6.1.4	The Facility Logbook in MO-288 is clear and legible.	X	
3. Is the author of any logbook entry clearly identified?	Included in CM-5-34, Section 3.17, 6.1.9	The Facility Logbook in MO-288 clearly indicates who is making entries.	X	
4. Are logbooks reviewed daily by Operations Manager/Team Leader?	Included in CM-5-34, Section 3.17, 6.1	The Team Leader reviewed the logbook and used some entries for briefing personnel on 5/12.	X	

WHC-CM-5-34, Sec. 3.0, 3.18, Operations Turnover

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.18 DOE Order 5480.19				
1. Is a briefing given by the Operations Team Leader/Designee prior to beginning shift activities?	Included in CM-5.34, Section 3.18, 5.1.3 Observed turnover on 5/12	The Team Leader provided a clear briefing of operations and potential problems.	X	

WHC-CM-5-34, Sec. 3.0, 3.20, Required Reading

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.20 DOE Order 5480.19				
1. Is Required Reading material kept readily available?	Included in CM-5-34, Section 3.20, 4.3 Reviewed required reading in MO-288.	Required reading is controlled by routing sheets. Reviews are performed and signed off by appropriate personnel. Non-timely reviews are followed up by the Operations Secretary and the Team Leader.	X	
3. Is required Reading completed in a timely manner?	Included in CM-5-34, Section 3.20, 4.4	Required reading available in MO-288 was being performed in a timely manner.	X	

WHC-CM-5-34, Sec. 3.0, 3.22, Operation Procedures

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-3-4, Section 3.22 IP-0673 IP-1140 DOE Order 5480.19				

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1. Are procedures that are not step sensitive designated by Standing Order?	Included in CM-5-34, Section 3.22, 3.4.1.1) Mike Aichele Long Term Standing Order book	There is a long term standing order available in MO-720 which specifically lists those procedures which are not step sensitive. There is also a note in some procedures which indicate they are not step sensitive.	X	
2. Are procedures that are not to be in hand during use designated by Standing Order?	Included in CM-5-34, Section 3.22, 3.4.1.4) Mike Aichele Long Term Standing Order book	There is a long term standing order available in MO-720 which lists those procedures which do not have to be in hand.	X	

WHC-CM-5-34, Sec. 3.0, 3.23, Operator Aid Posting

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.23 DOE Order 5480.19				
1. Are Operator Aids authorized?	Included in CM-5-34, Section 3.22, 4.2) Observation of Surveillance rounds	CPS sheets are posted in each building as required. They are audited, but not controlled as operator aids.	X	
2. Are Operator Aids periodically reviewed and surveyed?	Included in CM-5-34, Section 4.2, 4.4, 4.5 Operator Aid Log in M)-288.	Only one operator aid was included in the logbook and it is being surveyed. Field review of the 2404 MET areas found the operator aids in place.	X	

WHC-CM-5-34, Sec. 3.0 3.24, Equipment and Piping Labeling

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.24 DOE Order 5480.19				
1. Are temporary labels validated correctly installed by the Operations Team Leader?	Included in CM-5-34, Section 3.24, 3.4. 2404 building tour M. Aichele B. Rogers	No temporary labels were posted in the 2404 buildings.	X	
2. Are labels installed on valves, dampers, instruments, gages, pipes, ducts, major equipment, busses, MCCs, power panels, breakers, switches, room doors, emergency equipment, and fire protection systems?	Included in CM-5-34, Section 3.24, 4.1 2404 building tour M. Aichele B. Rogers	No labeling deficiencies were noted during facility inspections.	X	
3. Are areas requiring PPE such as hard hats clearly understood and/or marked?	Tour of facility Procedure 043 and 110 review	There were no areas requiring PPE observed during this review. Facility procedures do require use of PPE for some operations.	X	

WHC-CM-5-34, Sec. 3.0, 3.21, Timely Orders to Operators

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
CM-5-34, Section 3.21 DOE Order 5480.19				
1. Are daily orders communicated through shift briefs before personnel assume shift responsibility?	Included in CM-5-34, Section 3.21, 5.2 Attended shift briefing on 5/12	No specific daily orders are issued at CWC. However, the Team Leader did a good job of covering the Daily Release Sheet and potential problems.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: 13) There are sufficient numbers of qualified personnel to support safe operations.

Note: This Core Requirement is only to ensure adequate numbers of qualified personnel.

Assessment of qualification is addressed under Core Requirements 2 & 3.

APPROACH:

1. Using qualification records and job assignment records, compare the numbers of qualified personnel to the staffing levels identified by facility management to ensure Criterion 13.1 is met.
2. Verify the staffing levels are greater than or equal to any minimum staffing requirements identified in the authorization basis.
3. Review and assess staffing requirements identified by the authorization basis and line management by witnessing the performance or walking down plant operating procedure and work plans to verify that adequate numbers of personnel are available to operate the systems.

CRITERIA: 1. There is an adequate number of qualified personnel for the mission of the facility.

2. The staffing requirements are adequate to ensure safe operations.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Core Rqmt. 13 Criteria 1. & 2.	ISB, Organization Charts, FM - Robert Giroir OPN - Paul Crane OPN - Michael Aichele OPN - Jim Mitchell ENG - Mat Irwin RC - Brad Brannan ENV - Kent McDonald	Staffing specified in the ISB requires only one supervisor, one qualified operator, and one rad con tech. to operate the facility. A review of the organization chart and discussion with CWC management showed that the staffing required on any given day of operations needs one to six teams. There are 23 operators between the CWC & Burial Grounds. Cross training has been conducted. There are 10 Rad Con Techs that provide coverage from waste receipt exposure determination/verification to routine surveillance of the work environment. Full time Rad Con coverage of a given waste handling operation depends on exposure levels. Management considers there may be more staff than is needed for the current volume of waste handling operations & is evaluating the current/planned actual staffing need in conjunction with the ongoing S/RID revision.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: CR 15 The facility systems and procedures as effected by facility modifications are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.

APPROACH: Review procedure validation, walkdown, and review comment steps for recent procedure changes that incorporate the CWC 2404 phase V facility and have correctly included the requirements of the safety basis(this includes operating, maintenance, and administrative procedures).

CRITERIA:

1. Operations, maintenance, surveillance, and administrative procedures have been adequately updated to reflect the facility modifications and meet or exceed the operational performance guidance provided in DOE order 5480.19.
2. Operations, maintenance, surveillance, and administrative procedures implement the changes made in the approved safety basis resulting from the facility modifications.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1)Review the changes made to the plant operating procedures for the attributes listed in the above criteria.	Reviewed operating procedures SW-100-110 Receive radioactive waste at the Central Waste Complex SW-040-043 Inspect the CWC and Sodium Storage Building and Associated Equipment. SW-001-330 Respond to Solid Waste Management Facility Alarms and Indicators	The operating procedures correctly incorporated the 2404 buildings and the requirements of the ISB. The procedures are well structured, concise, and highlight ISB and worker safety requirements appropriately.	x	

1a)Review the validation records to assure a process exists and correctly incorporated the requirements in the safety basis.	Operating Procedure File in MO-720	Records for procedure development, revisions, validation and walkdowns were prepared and retained properly.	x	
1b)Review the operating procedure walkdown records to assure demonstrated independence and confirm comments were incorporated into the released POP.	see 1a	The operating procedure control process used at CWC is a computer based system with controlled change access. The system works very well.	X	
1c)Review the Interim Safety Basis implementation matrix for proper inclusion of identifying effected POPs.	HNF-SD-WM-RPT-296, rev 0	The effected procedures were identified in the matrix	x	

2)Review maintenance procedures for an implementing/validation process for the attributes listed in the above criteria.	All preventative maintenance procedures. Paul Hemsworth	The PMs correctly incorporated the 2404 buildings maintenance needs, but do not specifically identify ISB requirements or actions. This is all done using Plant Operating Procedures.	X	
2a)Review maintenance validation for completeness and correct implementation of ISB requirements.	See 2 above	see above	X	
2b)Review the maintenance procedure walkdown and comment incorporation records.	Reviewed PMs and the Job Control System Procedure in WHC-CM-5-34 section 2.17	The walkdown records were attached to the appropriate PM and retained per JCS procedure.	x	
2c)Review the ISB implementation matrix for correct inclusion of maintenance procedures.	Matrix	Vehicle and Facility maintenance procedures were correctly identified.	X	

3) Review the administrative procedure change process for appropriate inclusion of the phase V facilities management responsibilities.	WHC-CM-5-34	The administrative procedures are written so general that they cover the 2404 facilities.	x	
4) Review the governing administrative procedures for CWC operation and assure that IOSRs are identified and a management process is identified to assure compliance.	WHC-CM-5-34	The administrative procedures do not identify the three IOSRs for CWC uniquely, but does discuss responsibilities for some organizations. The management self assessment did include reviewing compliance with the ISB.		x

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT:CR 15 The facility systems and procedures effected by facility modifications, are consistent with the description of the facility, procedures and accident analysis included in the safety basis.

APPROACH:#2 Interview operations staff to assess their understanding of the operational requirements for the CWC 2404 facility and how the Interim Operational Safety Requirements are met.

CRITERIA:

#2 Operations, maintenance, surveillance, and administrative procedures implement the changes made in the approved safety basis resulting from the facility modifications.

#5 An equipment/system startup program is in place and adequately addresses operational testing to confirm operability of equipment, the viability of procedures, and the training of operators.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1)Interview operators and Radiological Control Technicians to assess their understanding of the ISORs, the additional responsibilities of the ISB and how they participate in meeting the requirements of the ISB.	Bruce Rodgers, Don Brotherton-NPOs	Both demonstrated an excellent understanding of the IOSRs that they were responsible for, i.e., 6.2.2.2-Source Control 6.2.2.3 Criticality. They did not have a clear understanding of IOSR 6.2.2.1 for Organization.	X	

2) Interview maintenance and work control staff to assess their understanding of the ISORs and their implementation.	Paul Hemsworth, Pat Bott	Both had a general understanding of the ISB and associated IOSRs, but did not have a working knowledge of specific implementation. Maintenance relies on Engineering for Authorization Basis management and Operations for implementation.	X	
3) Interview maintenance and work control staff as to their participation in the startup of the CWC 2404 facilities, the testing that was conducted and if training was adequate to perform the necessary maintenance. Also assess their understanding of the operation and maintenance requirements of safety support systems.	Pat Bott, Paul Hemsworth	Participation by maintenance was primarily in revising the PMs for CWC to include the 2404 facilities. Frustration was noted in that with the type of contracting process used for W112 the contractor supplied a turn key facility with an Acceptance Test Report. No OTPs were conducted with the operating organization.	X	

4) same as (3) above but interview operations staff.	Bruce Rodgers-NPO Mike Aichele-Team Lead Paul Crane-Ops Manager	Operations participation was actually a teaming effort with Maintenance and Engineering to achieve a startup status for the facility and associated systems. Strong desire exhibited by all to know their systems well and operate them correctly.	X	
5) Interview technical support staff as to their understanding of their responsibilities as it pertains to compliance with The ISORs, the closeout of actions from the ISB implementation matrix, and the processes used to both comply and update the Safety Basis.	Matt Irwin Engr Mgr Randy Ames-Engr Lead Will Hansen-Fac Project Engr.	Very knowledgeable technical staff that works well with the used organizations (Ops and Maintenance). Strong ownership of the Authorization Basis including USQs, updates, supporting training. The training provided by Randy Ames on the ISB for CWC was very high quality and focused on the users.	X	

6) Interview CWC management and leadership personnel to assess their understanding of their responsibilities for compliance to the ISB and how the CWC 2404 facilities have increased their responsibilities.	Paul Crane, Susan Stitt, Matt Irwin, Mike Aichelle, Paul Hemsworth	Good understanding of the ISB and associated IOSRs. The IOSR on Organization, #6.2.2.1 was not understood as to how it is being complied with, although the Engineering Manager did understand the annual letter to RL that showed evidence of the organization. How SWITS is utilized was discussed, and discovered that it is not being managed as a technical basis document, but as a programmatic support data base.	X	
7) Interview technical support and management personnel to determine if a facility modification startup program is in place and was administered adequately for the CWC 2404 facility.	same as above	A unique startup program is not utilized. Corrective Maintenance or small projects are used for this type of activity.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT:CR 15 The facility systems and procedures as effected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.

APPROACH:#3 Interview technical support staff to assess their knowledge of both the operational and administrative procedure change process that implemented the additional requirements of the CWC 2404 facility.

CRITERIA:

1. Operations, maintenance, surveillance, and administrative procedures implement the changes made in the approved safety basis resulting from the facility modifications.
7. Utility and support systems are operable, fully functional, and meet the performance requirements of the approved safety basis.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1)Interview technical support staff to assess their knowledge of the operational procedure change process, show evidence it was used for the startup up of the CWC 2404 facility, and the requirements of the ISB are noted appropriately.	R Ames, M Irwin, W Hansen	Reviewed the updated -110 and -043 procedure change/update process. Excellent working knowledge and strong relationship with operations to achieve a quality product.	X*	

2)Interview technical support staff to assess their knowledge of the administrative procedure change process, show evidence it was utilized for the startup of the CWC 2404 facility and the requirements of the ISB are noted appropriately.	same as above	Engineering was the initiating organization for the administrative procedure changes as they related to 2404 startup and ISB implementation.	X	
3)Interview management and leadership staff to assess their knowledge of the operational and administrative procedure change process and demonstrate performance of a self assessment program that addresses both.	S Stitt, M Irwin, P Crane.	Good knowledge of change processes. Adjustments to the self assessment program that is more focused on how to improve performance, not improved compliance would provide benefit.	X	

4)Interview exempt staff responsible for the MYPP to demonstrate the operation of the CWC 2404 facility was included in the baseline funding.	John Lang	2404 facilities were in included in the MYPP project baseline	X	
5)Interview technical support personnel to demonstrate how the successful startup of the CWC 2404 facility was conducted, including using the appropriate data from the ATPs and OTPs that were conducted.	Randy Ames, Will Hansen	As previously noted the W112 project was a fixed price turn key contract. The ATP was conducted by the vendor and documented in an ATR. Engineering has prepared a good technical package for operation of the 2404 facility.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: CR 15 The facility systems and procedures as effected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis in the safety basis.

APPROACH:

#4 Review with technical support personnel that vendor drawings, specifications, and operational characteristic data have been properly incorporated and user staff notified.

#5 Review with technical support personnel responsible for modifications that vendor turnover open items have been properly dispositioned and a formal process to verify construction activities met functional design was utilized.

CRITERIA:

#4 Drawings and other documentation relied upon for operations and maintenance activities are consistent with the new existing plant configuration.

#6 Construction vendors have completed all work and appropriate turnover documentation has been supplied to the operating organization. This needs to include the construction checklist and open items punchlists.

#8 A USQ screening relative to the planned modification was completed prior to initiation of design and was appropriately dispositioned.

#9 The Functional Design Criteria for modifications was utilized by the construction vendors for design, fabrication, and installation (includes conducting ATP and OTPs).

3)Review vendor turnover package with technical support staff including the verification of As-Built drawings.	Wil Hansen, Brian Slettene EDT 618631 and FDNW ECN W-112-019 Vendor As-Built document submittal and Installed Design Verification submittal.	Vendor supplied Professional Engineer verified documents that both design and installation for structural, seismic, all fire system components, electrical and lighting, HVAC, plumbing, electrical power and structural performance met the FDC.	X	
4)Review the vendor open items punchlist and evidence that they were properly dispositioned.	Vendor turnover package.	The package contained a very informal punchlist that was noted as complete. Hats did contain the items and confirmed that they were tracked to completion	X	
5)Review with technical support personnel that the Certified Vendor Information including spare parts, was received, included in procedures, and properly dispositioned for retrieval.	ICF-KHC data transmittal #0005 "Operations and Maintenance Manuals	Submittal very complete for all installed systems and components in the 2404 buildings that would provide the basis for preventative and corrective maintenance and spare parts.	X	

<p>6) Conduct a facility walkdown with technical support personnel to show evidence that drawings and other documentation used is consistent with the CWC 2404 facility configuration.</p>	<p>Brian Stellene As-Built drawing package for W112 project.</p>	<p>1. The as-built field verified drawing package prepared by Facility Engineering was of excellent quality. It was field verified with both the cognizant engineer and operations staff. This is considered to be a best practice.</p> <p>2. Walkdown included taking the newly released as-built drawing package and the redline package that showed the field updates required. This was essentially an ECN verification.</p> <p>3. System walkdowns: A few systems in the 2404 buildings were reviewed in detail. All but the fire suppression system were depicted correctly with unique identifiers. The fire suppression system did not include system and component numbers, and the installation appeared to have some issues with sprinkler heads being located too close to the building components and some non-linear sections of piping. Further discussions with both maintenance and engineering staff indicated that Fire System Maintenance worked totally independent of the CWC staff and set their own standards of system performance.</p>	<p>X</p> <p>X</p>	<p>X</p>

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT: CR 15 The facility systems and procedures as effected by facility modifications, are consistent with the description of the facility, procedures and accident analysis described in the safety basis.

APPROACH: #6 Review the listing of safety support systems to ensure consistency with the safety basis. This includes defined organizational roles, responsibilities, and interfaces required to comply with the AOSRs.

CRITERIA: # 7 Utility and support systems are operable, fully functional, and meet the performance requirements of the approved safety basis.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1) Review with the technical support personnel that the performance requirements of the CWC 2404 safety support systems comply with the ISB (these include HVAC, fire suppression system, electrical distribution, monitoring instrumentation, and alarm systems).	Randy Ames, Will Hansen CWC Master Equipment List	The ISB only identifies the fire suppression system and the HVAC performance requirements. The fire system is NFPA mandated and is not accounted for in the accident analysis. The HVAC provides a specified volumetric change rate in the buildings, but with the buildings not providing containment or confinement there is no safety limits associated with it. All systems in the 2404 buildings are presented as features for operation and not part of the nuclear safety envelope. The technical staff was very aware and committed to the operational needs as it relates to these safety support systems.	X	

2)Review the system testing results from the systems from (1) above with the technical support staff to assure performance to the ISB.	Randy Ames, M Irwin, W Hansen.	The test results were reviewed by engineering and issues by EDT to provide ready availability and formal retention.	X	
3)Review with management the process used to assure personnel responsible for performance and administration of the IOSRs and safety basis compliance are identified, knowledgeable, qualified. This includes roles, responsibilities, and formal interfaces that need to be maintained, both internal and external.	M Irwin, P Hemsworth P Crane	CWC management have spent a great deal of time developing a culture of cooperation and acceptance of their nuclear and industrial safety responsibilities. Personnel with responsibilities for guiding and administering activities that related to the safety basis were cognizant of their assignment. Roles and responsibilities were not well documented nor were the external interfaces. The operation runs quite well due to the ownership and dedication of all staff.	X	

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT:CR 15 The facility systems and procedures as effected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.

APPROACH:#7 Interview personnel associated with configuration management and record storage to assess their understanding of program requirements and responsibilities. This will be reviewed with core requirement CR 8.11-Records Management.

CRITERIA:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1)				
2)				

PHASE V STORAGE ORR APPRAISAL FORM

Management 19.1

CORE REQUIREMENT: The technical and management qualifications of contractor personnel, responsible for facility operations, are adequate.

APPROACH:

1. Review test material to verify that they adequately reflect training content and test for an understanding of technical fundamentals, procedures, ACs, TSRs, plant activities, and responsibilities associated with emergency response.
2. Review and assess management qualification requirements for adequacy.
3. Review and assess completion of qualifications and test results for management personnel.

CRITERIA:

2. Adequate documentation of management qualifications is available.
3. Examinations, given to management personnel, are adequate in their depth and breadth of subject matter as it pertains to facility operations.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	ACCEPTABLE	
			YES	NO
1) Review test material.	N/A	Test not given following ISB and new facility briefing.		
2) Verify the tests adequately reflect training content.	N/A	Test not given.		
3) Verify the tests adequately test for an understanding of technical fundamentals, procedures, ACs, TSRs, plant activities, and responsibilities associated with emergency response.	N/A	Test not given.		

4) Review management qualification requirements for adequacy.	Reviewed Position Descriptions and qualification requirements in training file.	Position requirements are adequate.		
5) Review completion of qualifications and test results for management personnel.	N/A	None required.		

PHASE V STORAGE ORR APPRAISAL FORM

Management 19.2

CORE REQUIREMENT: The technical and management qualifications of contractor personnel, responsible for facility operations, are adequate.

APPROACH:

4. Conduct interviews to determine the extent of knowledge of technical fundamentals, procedures, ACs, plant activities, and responsibilities associated with emergency response.

CRITERIA:

1. Management has adequate on-the-job experience and/or training/education that qualifies them for their positions.

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	ACCEPTABLE	
			YES	NO
1) Interview CWC management, including senior management, responsible for operating the CWC.	S. Addleman P. Crane P. Brannan	Team Lead, Environmental Manager, Operations Manager, Radiological Controls		
What qualification or certification enables you to hold your position?	"	Managers hold technical degrees, have obtained specialized certifications, have completed training, and have relevant experience appropriate to their present assignment.	X	
Describe previous management and technical assignments where you had responsibility for storing and managing radiological, dangerous, and mixed waste materials.	"	Personnel interviewed described previous assignments appropriate to their present assignment, including experience in hazardous material management and in other Hanford facilities (Tank Farms, PUREX, PFP).	X	
What are the characteristics of concern for personnel safety and environmental protection in the waste materials stored in the CWC?	"	Characteristics discussed included hazardous materials and carcinogens. Issues of concern are inhalation of and contamination resulting from these materials.	X	

What accidents or events in the CWC might require emergency response action?	"	Accidents or events described include spills, fork truck or crane material handling event, container breach, dropped container.	X	
Describe your role and responsibility in emergency response?	"	Roles described include consult and advise for environmental and personnel protection, cleanup, and decon; Building Emergency Director; Facility Management; RadCon advisor.	X	
How can the CWC be operated and managed to prevent or mitigate reduced personnel safety and loss of environmental protection?	"	Maintain operator and supervisor knowledge levels high. Continue frequent and timely safety meetings, emphasize MOP tours, conduct innovative training (fork truck rodeo).	X	
Who has the final responsibility for safety in the CWC?	"	Each individual is responsible for his or her own safety. Management is responsible for safety in the facility.	X	

APPENDIX D

REVIEW TEAM MEMBER PROFILES

CWC Project W-112/ISB ORR Review Team Member Profiles

NAME: Richard E. Allen

SPECIALTY: Emergency Preparedness

EXPERIENCE: 16 years of professional experience in environmental regulations and emergency preparedness. Presently the emergency preparedness coordinator for T Plant. Write and perform drills, review and revise emergency manual and guide, readiness review team member for other facilities.

NAME: Annette E. Aughey

SPECIALTY: Operations / Administrative

EXPERIENCE: 14 years experience as a Nuclear Process Operator. Currently a Solid Waste Requirements (SRIDS) expert as well as the administrator of the WHC-CM-5-36 manual. Participation on the ORR team will be to evaluate the usefulness of the procedures from a users point of view and coordination of the ORR team results.

NAME: James R. Barber

SPECIALTY: Maintenance

EXPERIENCE: 28 years experience in Electronics, Instrumentation & Controls. With the last six years spent Planning, developing, coordinating and administrating site-wide assessment of technical procedures. Provided administration of hanford site maintenance procedure program. Developed administrative manuals implementing DOE Orders 5480.19, "Conduct of Operations...", and 4330.4B, "Maintenance Management Program."

NAME: William W. Bowen

SPECIALTY: Operations/ Management / Security

EXPERIENCE: 29 years experience in management, construction, start up, and operation of nuclear and chemical plants in both commercial and government environments. BS, MS Mechanical Engineering

NAME: Samuel J. Dechter

SPECIALTY: Management Systems

EXPERIENCE: Over 30 years management and engineering experience of which 20 years was spent in management with various DOE GOCO Site. BS and MS in Physics, has qualified as EOW, NPE and Shift Supervisor.

NAME: John I. Gould

SPECIALTY: Environmental Compliance

EXPERIENCE: 30 years experience in Environmental Compliance reviewing, analysis, planning and field investigation, for regulatory compliance in hazardous environments, in both the private and DOE sectors. MS- Physics Minors in Engineering mathematics/Atmospheric Physics, BS Environmental Compliance.

NAME: John A. Locklair, Jr.

SPECIALTY: Nuclear Safety

EXPERIENCE: 12 years experience in Nuclear Safety and Health Physics in both commercial and Department of Energy. Also responsible for review and publication of Safety Basis documents. BS Geophysics

NAME: Kenneth W. McLain

SPECIALTY: Radiological Control

EXPERIENCE: 14 year experience in operational Health Physics at commercial nuclear and Department of Energy sites. Current assignment includes implementation of 10 CFR 835 and coordinating the RFSH response to Enforcement Action EA-96-02.

NAME: Richard B. Millward

SPECIALTY: Quality Assurance

EXPERIENCE: 25 years in the Quality Assurance field including roles ranging from QC inspector, QA engineer, Lead Auditor and Manager.

NAME: Timothy J. Powell

SPECIALTY: Operations and Management

EXPERIENCE: 23 years experience in construction, start-up, operation, oversight, training and maintenance in commercial nuclear power and Department of Energy (DOE) activities. Recently, Mr. Powell provided four (4) years of program support to DOE at Hanford, working at the Director level in the Waste Programs Division (this support included participation as a team member on two (2) DOE-RL Operational Readiness Reviews).

NAME: Rodney D. Pickett

SPECIALTY: Conduct of Operations

EXPERIENCE: Six years experience in design and operation of power distribution, plant parameter monitoring and control equipment, pneumatics, piping/plumbing. BS Electrical Engineering, Certified Shift Manager.

NAME: Thomas C. Stone

SPECIALTY: Industrial Safety/Hygiene

EXPERIENCE: 20 years experience in the Safety and Health Field, including marine construction, a large telephone company. Was also Safety Manager at WPPSS Plant #2 while it was under construction. BA in Geography and a BS in Occupational Safety and Health.

NAME: Shelby J. Turner

SPECIALTY: Operations, Safety

EXPERIENCE: 28 years working in operations and oversight of naval reactors programs and DOE facilities including participation on the DOE INEL tiger Team assessment and lead auditor for contractor reviews. Responsible for reviewing Nuclear and Industrial safety, Conduct of Operations. and maintenance.

NAME: Ronald H. Wight

SPECIALTY: Assistant Team Leader

EXPERIENCE: 15 years experience in commercial and nuclear environments as industrial safety specialist. Experience as safety engineer in Research and development, startup, and established facilities. Certified lead auditor, and Certified Associate Safety Professional ASP.

NAME: Charles J. Wolfe

SPECIALTY: Team Leader

EXPERIENCE: 19 years in the nuclear field encompassing training, qualification and operation of non-nuclear, nuclear, and nuclear reactor facilities, have experienced the challenges of restarting the Rocky Flats Weapons Plant. Established and monitored the implementation of the Rust Geotech Compliance Management System including Readiness Reviews and Conduct of Operations. The most recent responsibility was the development and implementation of a transition methodology that provided for the identification through resolution of all transition and contract close-out issues for Rust Geotech Inc., in Grand Junction, Co.

NAME: Mike T. York

SPECIALTY: Engineering

EXPERIENCE: 18 years experience in Engineering, project and program management dealing with facility operations and multi - facility monitoring systems. BS Nuclear Engineering, BS Business Administration.

APPENDIX E

ORR IMPLEMENTATION PLAN

OPERATIONAL READINESS REVIEW IMPLEMENTATION PLAN (IP)

PROJECT W-112 - PHASE V STORAGE BUILDINGS

CENTRAL WASTE COMPLEX

DISCLAIMER

This Operational Readiness Review Implementation Plan (ORRIP) was written in accordance with WHC-CM-5-34, "Solid Waste Disposal Operations Administration" Section 1.4, "Operational Readiness Activities". The ORRIP has been issued as a controlled document.

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ACRONYMS AND ABBREVIATIONS

AC	Administration Control
ALARA	As Low As Reasonably Achievable
ATP	Acceptance Test Procedure
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
CH	Contact-Handled
COO	Conduct Of Operations Department
CPS	Criticality Prevention Specification
CRAs	Criteria and Review Approaches
CSER	Criticality Safety Evaluation Report
CWC	Central Waste Complex
DNFSB	Defense Nuclear Facilities Safety Board
DOE	Department Of Energy
ECN	Engineering Change Notice
HATS	Hanford Action Tracking System
IP	Implementation Plan
ISB	Interim Safety Basis
LCO	Limiting Condition of Operation
ORR	Operational Readiness Review
ORRIP	ORR Implementation Plan
OSHA	Occupational Safety and Health Administration
OSR	Operational Safety Requirement
OTP	Operational Test Procedure
PM	Preventive Maintenance
PMT	Post Maintenance Teasing
POA	Plan-of-Action
RFSH	Rust Federal Services Hanford
RIDS	Records Inventory Disposition Schedule
RT	Review Team
RTL	Review Team Leader
RWP	Radiation Work Permit
S/RID	Standards/Requirements Identification Document
TRU	Transuranic
TSR	Technical Safety Requirement
VPWMO	Vice President Waste Management Organization
WAC	Washington State Administrative Code

REFERENCES

- 1) WHC-IP-1120, Rev 4, *Standards/Requirements Identification Document (SRIDS)*
- 2) WHC-CM-5-36, *SWD Internal Requirements*
- 3) WHC-CM-5-34, *Solid Waste Disposal Operations Administration*
- 4) WHC-IP-1048, *Operational Readiness Activities*
- 5) HNF-SD-WM-ISB-007, *Central Waste Complex Interim Safety Basis*
- 6) HNF-SD-WM-PLN-124, Rev. 0 *Plan-Of-Action For Phase V Storage Operational Readiness Review*
- 7) *DNFSB RECOMMENDATION 90-2 REQUIREMENTS INFORMATION DOCUMENT*
- 8) RL-ID-5480.31, *Startup and restart of Nuclear Facilities*
- 9) DOE-STD-3006-93, *Planning and Conduct of Operational Readiness Reviews*
- 10) ECN 164059, *Phase V Storage Functional Design Criteria*

1.0 INTRODUCTION

1.1 General Facility Description

The Phase V Storage buildings are located in the 200 West Area Central Waste Complex (CWC) and are bounded by Dayton Avenue, 23rd Street, and 16th Street. Phase V Storage consists of three Long-Term Drum Storage buildings that will provide 13,300 drum equivalent of radioactive and mixed solid waste storage space. Construction is similar to existing CWC structures. Contact-Handled (CH) wastes from onsite and offsite generators are to be stored. Waste will include Low-Level Greater than Category 3, Mixed Low-Level, Transuranic (TRU), Suspect TRU, TRU Mixed, and remote-handled waste shielded down to CH packages. The storage area will be capable of receiving and accommodating 208-liter (55-gallon) and/or 322-liter (85-gallon) palletized drums stacked up to three high, and other waste packages such as steel boxes.

The design utilized manual waste storage and waste package transport concepts (e.g., palletized containers and forklift transport) to safely and compliantly store solid waste. The storage area will be accessible to appropriate drum and/or pallet moving equipment. The facility is equipped with a fire suppression system, 120 volt and 480 volt electrical system, telephone, sanitary/raw water system, freeze protection, new and/or upgraded access roads, sidewalks, fencing, fire alarm system, radio fire alarm reporter, exhaust ventilation, nonisokinetic record samplers, ventilation, and fire detection interlocks, portable fire extinguishers, sloped epoxy coated floors, liquid collection curbing and/or catch basins, personnel doors, roll-up doors, lighting, and emergency lighting.

1.2 Facility Readiness

Prior to performance of the Operational Readiness Review (ORR), the facility will conduct a Readiness Self-Assessment to ensure facilities, equipment, personnel, procedures, and management control systems are in place to operate safely, efficiently, and in compliance with all applicable requirements. After satisfactory completion of the facility self-assessment, the Solid Waste Management Facility Manager will declare readiness to the ORR Review Team Leader (RTL) who will initiate the Rust Federal Services of Hanford, Inc., (RFSH) ORR.

The CWC facility personnel will support the ORR Review Team (RT) by providing all documentation that substantiates facility readiness, access to the facility and personnel, adequate accommodations to perform the ORR, and by performing drills and operations requested by the RT.

2.0 PURPOSE

The purpose of this review is to ensure facilities, equipment, personnel, procedures, and management control systems are in place to operate the new storage buildings in the CWC, under the new authorization basis, in a safe, efficient, and compliant manner.

3.0 SCOPE

The Phase V Storage (Project W-112) was constructed to provide additional mixed solid waste storage space in the CWC to store containers prior to

processing and/or treatment. The CWC is operated by RFSH, Solid Waste Management organization. The W-112 project included infrastructure work, a maintenance trailer supporting the Waste Receiving and Processing Plant (WRAP), and a support trailer supporting WRAP, as well as the three Phase V Storage buildings. The WRAP trailers are in operation and will not be included in the scope of the ORR for the Phase V Storage buildings. Therefore, subsequent reference to Project W-112 will only be in relation to the three additional storage buildings, 2404 Series, to be incorporated into the CWC.

The CWC Phase V Storage buildings are a modification to an existing facility (CWC). The current and approved CWC safety basis is HNF-SD-WM-*ISB-007, Central Waste Complex Interim Safety Basis (ISB)*, which incorporates new facility inventory limits affecting all CWC storage buildings. The changes imposed by HNF-SD-WM-*ISB-007* consist of adding the three buildings to the CWC, increasing inventory limits, and upgrading the accident analysis to be consistent with waste distribution. The *ISB* documents the CWC as a preliminary Hazard Category 2, based on a facility radiological inventory and threshold quantities of DOE-STD-1027-92. Startup of a modification made to a Hazard Category 2 Nuclear Facility (CWC) with a corresponding change to the safety basis, requires performance of an Operational Readiness Review (ORR) per WHC-CM-5-34, *Solid Waste Disposal Operations Administration*, Section 1.4, *Operational Readiness Activities*. Approval Authority has been determined to be the U.S. Department of Energy, Richland Operations Office (RL) OPS Office Manager. The Review Type and Approval Authority are commensurate with the facility's potential impact on safety and its planned conduct of operations.

The Phase V Storage buildings operation is an add-on to the existing facility operations. Therefore, a graded approach will be used for the completion of the ORR. The scope of this ORR is the following:

1. Ensure that the facility structure, systems, and components are adequately installed and function as designed, and
2. Ensure the new *ISB* requirements are administratively incorporated into all phases of facility operations. The breadth of the ORR is to ensure that the new Phase V Storage buildings are operated in accordance with the *ISB* requirements for nuclear criticality and radionuclides inventory control.

The following areas have been identified as areas that will need to be reviewed during the ORR. Specifics on the scope are contained in Appendices A and B.

- Construction of the facility in accordance with drawings and specifications
- Grading and facility access in accordance with drawings and specifications
- Utilities, supplied connections, and operational status of air, water, and electrical power distribution
- Approved operating, maintenance, and support procedures
- Operating, maintenance, and support personnel training and qualifications

- Safety monitoring and fire protection equipment and systems
- Approved Criticality Prevention Specification
- Radiological controls in place (e.g., Radiological Work Permits, ALARA review, etc.)
- Safety documentation adequate to support facility operation
- Administrative procedures modified to include 2404 Series facilities
- Organization structure adequate to support facility operations
- Modified safety basis limits
- Emergency preparedness.

4.0 ORR PREREQUISITES

Prior to the commencement of the ORR, RFSH Conduct of Operations (COO) personnel and/or select RT members will conduct a check of all prerequisites to ensure they are completed (see Appendix A). Determinations as to the adequacy (readiness) of prerequisite items for actual startup will be evaluated during review performance.

5.0 OVERALL APPROACH

5.1 Introduction to ORR Process and Generic Approach

The ORR will be performed per WHC-CM-5-34, *Solid Waste Disposal Operations Administration*, Section 1.4, *Operational Readiness Activities*. The overall ORR process consists of the following basic steps:

- Review Team Leader (RTL) will be assigned by the Vice President Waste Management Operations (VPWMO).
- Plan Of Action (POA) is written by the facility to formalize the decisions necessary to execute a new start. The POA will be provided through Flour Daniel Hanford (FDH) to DOE-RL for review, comment, and approval.
- Implementation Plan (IP) is drafted based on the DOE RL approved POA.
- RTL selects personnel to be members of the RT.
- As the facility performs actions to obtain readiness, the RT will review and provide comments to the IP; perform required reading, training, and facility familiarization.
- The facility will declare readiness in writing to the RTL.
- Upon verification of all prerequisite completion, the RT will commence the ORR. The RT will conduct a performance based ORR consisting of documentation review, observation of facility operations and drills, personnel interviews, and facility/equipment hand-over-hand inspections. The RT will use the Criteria and Review Approaches (CRAs) of Appendix B

when performing the review. The CRAs were developed to include the Core Requirement, Criteria, Review Approach, Basis, and References.

- The RT will prepare and distribute the final ORR Report (see section 5.2) with all Findings classified as either prestart or post-start (see Appendix D for Finding Classification Criteria)
- The facility will determine and perform corrective actions to resolve RT Prestart Findings (see section 5.3).
- After satisfactorily completing Prestart Findings, the facility will issue a Readiness to Proceed Memorandum to DOE RL.
- DOE RL will perform their review and present Findings to the facility.
- The facility will determine and perform corrective actions to resolve DOE Prestart Findings.
- After satisfactorily resolving Prestart Findings, DOE RL will authorize startup of the facility.
- Facility resolve Post-start Findings.

5.2 Finding Resolution and Closure Method

Facility management will prepare Corrective Action Plans (CAPs) which address the Findings. The RT and RTL will be available to support facility management in review and closeout of findings as necessary. The CAP for each Finding should contain the following elements:

- a. The Finding, as written in the ORR report submitted by the RT, and whether the Finding is a Prestart or Post-start Finding.
- b. The actions shall address the deficiencies identified in that Finding. The actions shall provide evaluation of any overall programmatic deficiencies or root causes related to a specific Finding which may lead to further similar occurrences and include actions addressing such deficiencies or root causes.
- c. The proposed dates by which the actions will be completed. If the actions for a Finding are phased, then the dates for each phase shall be detailed.
- d. For Post-start Findings, a description of the risks and mitigating actions, if any, to be taken during the interim which will reduce the risks associated with the Finding to an acceptable level before final correction. Include justification that the activity can proceed with acceptable risk.

6.0 ORR PREPARATIONS

The RTL will select the RT members. RT members should have the following verified qualifications:

- Technically knowledgeable in the area assigned to evaluate. The knowledge should include experience working in the technical area.

- Knowledge of evaluation processes and methods. This knowledge may be gained through experience as an auditor or inspector or it may be gained through training evaluated as acceptable by the RTL.
- Facility specific information which may be gained through a combination of required reading and facility tours and presentations.
- Independence. RT members (including the RTL) will not be individuals who are assigned direct line management responsibilities for the work being reviewed and RT members shall not review his or her own work or work for which they are directly responsible.

RT members will be required to perform or have previously performed facility familiarization (through tours, presentations, and provided documentation), required reading, and specific training. RT members will be provided facility documentation (operating procedures, emergency response procedures, permits, FDCs, etc.) prior to commencement of ORR as training material to gain facility specific knowledge. Tours and presentations will be coordinated between the facility and RTL. The RT members will be required to take or have taken applicable site and facility training to gain access to the facility. Prior to review performance, the RTL or designee will prepare and stage review forms, ORR Report shell, and any other report material which will allow an efficient review performance.

7.0 ADMINISTRATION

7.1 Review Team Composition/Structure

The RT is comprised of the RTL and a number of members who are divided amongst the Core Requirements. An RT member may be assigned to one or more Core Requirements depending on need and qualifications. An RT member assigned to a Core Requirement may solicit input of other RT members or experts as seen fit to adequately evaluate a Core Requirement. An expert is not part of the RT but an individual who has an in depth knowledge of a very specific item.

RT members will be knowledgeable and have experience in the various areas of review (e.g., safety, quality assurance, environmental protection, engineering, operations, etc.). RT members will be determined by the RTL.

7.2 Meetings

To facilitate RT coordination and the exchange of information, the RT will meet regularly. Prior to the review, RT members will meet to participate in orientation, training, required reading, IP review, and facility tours and presentations. During the review, RT members will meet daily for debriefs. Facility personnel and management will be invited to these debriefs. These meetings will permit the RT members to discuss observations, potential Findings, actual Findings, problems encountered during review, additional information required, additional time required, schedules etc. Meetings will also permit the RTL to identify any trends or areas where more detailed information may be required. The RTL will use these meetings to review the efforts of the RT members to assure all Core Requirements are thoroughly assessed and that approaches used are in accordance with the CRAs. It will also allow potential schedule difficulties or possible information gaps to be noted in time to take corrective actions. During the review, designated RT

members will also meet daily with the facility to discuss potential Findings, actual Findings, next day events, schedule problems, conflicts, additional information, etc.

7.3 Correspondence, Communication and Interface

Communication is a key aspect to proper ORR performance. Communication, both written and oral, is vital between facility, RT, and DOE as well as between RT members. To facilitate ORR performance, the facility will appoint a single point of contact to interface with the RT and DOE. Likewise the RT will have a single point of contact, to interface with the facility and DOE. The points of contact are responsible for coordinating meetings, evolutions/operations observations, interviews, needed documentation and for expressing concerns of both facility and RT. The RT is to be diligent in its thorough documentation of appraisals and Findings. RT Findings will be proof read for clarity, accuracy, and preciseness by other RT members prior to facility management exposure or submittal to final report. Meeting Minutes will be taken and distributed if warranted (e.g., poor meeting attendance, closeout meeting, extreme meeting interest, etc.)

8.0 REPORTING

8.1 Reporting Review Results

The ORR Report must be clear as to what was evaluated and the methodology used during the evaluation (review logic). To ensure clarity and consistency, standard forms will be used by all RT members. Standard Forms are contained in Appendix C and consist of the following: ORR Appraisal Form, ORR Finding Form, and ORR Observation Form. There is no specific form for Finding Resolutions but they will be tracked by the facility until they are appropriately closed.

An ORR Appraisal Form or line of inquiry will be used to document each Criteria evaluation. The form will be used to document personnel contacted, documentation reviewed, evolutions/operations witnessed, areas visited and a summary/comment of the review.

An ORR Finding Form will be used for each Finding noted. A new form will be used for each new Finding. A Finding is considered an item that is not in agreement with contractual requirements or if not corrected could have an adverse impact on the environment, personnel, or the public. (See Appendix D for further detail on classification of a finding) An Observation on the other hand is an item which does not fall within the bounds of a finding but if corrected would improve overall performance. ORR Finding Forms will document the Finding by providing the requirement(s) deviated, reference(s), and a discussion, conclusion, and resolution section. The ORR Observation Form will be used to document all Observations noted during the review.

All forms should be complete and in enough detail to allow an outside agency reviewing the form to follow the review logic and means utilized to verify performance with respect to the Criterion and to thereby validate the completeness and adequacy of the ORR. If for some reason the intent of a Criterion cannot be achieved, the reason should be documented.

All Findings will be evaluated for similarities, overlap, and duplication. Findings which are duplicate or overlap will be combined into a singular Finding and similar Findings will be grouped. These grouped Findings will make up the Master Findings List. The compilation of Master Findings will be evaluated by the RT to determine if they qualify as either a prestart or post-start Finding (per Appendix D).

Any RT member is free to issue a dissenting opinion, which will be carefully considered. Every attempt will be made to resolve the issue during the course of the review. However, should resolution not be achieved, provisions will be made to include the dissenting opinion in the ORR report.

The RTL will review the Findings List and develop an ORR report to document the results of the ORR and to provide justification for the RT's recommendations. All ORR Appraisal Forms or Lines of Inquiry, ORR Finding Forms, ORR Observation Forms, and the Findings List will be included in the ORR report to provide the review logic. Core Requirement Leaders will be asked to sign findings and observations, signifying their agreement in report content and conclusion in the area they were assigned. Dissenting opinions that have not been resolved will be appropriately addressed in the ORR report.

The RTL will report any problems or successes and document them as Lessons Learned to aid future ORRs. These should include Lessons Learned with respect to the ORR process, as well as any Lessons Learned regarding the design, construction, and/or decommissioning of DOE nuclear facilities.

8.2 ORR Report Issuance

Copies of the ORR report will be transmitted by the RTL to the VPWMO and to the facility manager. The original ORR report will be entered into Records Inventory Disposition Schedule (RIDS) by RFSH-COO.

8.3 Post-ORR Presentations

The RTL will coordinate any follow-up meetings, which include closeout meetings with the facility's management, debriefings of the RT, and presentation of the ORR report to upper management. Presentations may be required to internal or external interested groups as well.

9.0 SCHEDULE

The following is a proposed schedule that will be more firmly established prior to the ORR commencement date.

Date	Action
up to April 14, 1997	Convene Team and prepare for ORR. (issue IP)
February 1, 1997	Facility commence internal readiness reviews, affidavits.
May 6, 1997	Commence ORR.
May 9, 1997	Conclude ORR and commence ORR report.

May 13, 1997	Initiate report release.
May 14, 1997	Facility develop Corrective Action Plan.
May 20, 1997	Facility complete Corrective Action Plan.

APPENDIX A: PHASE V STORAGE ORR

PREREQUISITE CHECKLIST

PHASE V STORAGE ORR IMPLEMENTATION PLAN

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**Phase V Storage Operational Readiness Review
Prerequisite Checklist
Core Requirement 1**

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

Are the following prerequisites approved, in place, and ready for review?

- ☐ 1) Operating procedures
- ☐ 2) Maintenance procedures
- ☐ 3) Emergency operating procedures/alarm response procedures

The prerequisites for Core Requirement 1 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 2

Training and qualifications 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).

Are the following prerequisites approved, in place, and ready for review?

- ☐ 1) Operations and maintenance personnel training records.
- ☐ 2) Training and qualification program (e.g., training material, OJT Check Sheets, Job Performance Measures, test material, training aids, etc.)
- ☐ 3) Criticality safety training
- ☐ 4) Operating procedures training
- ☐ 5) Administrative procedures

The prerequisites for Core Requirement 2 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 3

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.

Are the following prerequisites approved, in place, and ready for review?

- ☐ 1) List of CWC operations and support personnel
- ☐ 2) List of operations and operations support personnel

The prerequisites for Core Requirement 3 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 4

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 the facilities and safety-related utility systems is established.

Are the following prerequisites approved, in place, and ready for review?

- ☐ 1) Interim Safety Basis
- ☐ 2) Fire Hazards Analysis
- ☐ 3) Radiation protection program
- ☐ 4) Operational safety requirements

The prerequisites for Core Requirement 4 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 5

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 calibrations of operation or that satisfy Technical Safety Requirements. All systems are currently operable and in a satisfactory condition.

Are the following prerequisites approved, in place, and ready for review?

- ☐ 1) Operational Acceptance Test Procedures and results

___ 2) Records of safety related system testing

The prerequisites for Core Requirement 5 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 6

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.

Is the following prerequisite approved, in place, and ready for review?

- ___ 1) Corrective action plan that was developed from the FEB review of Solid Waste Management performed in December, 1996.

The prerequisite for Core Requirement 6 appears to have been met and is ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 7

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

Is the following prerequisite approved, in place, and ready for review?

- ___ 1) The approved Waste Management SRID (which includes CWC [Phase V Storage])

The prerequisites for Core Requirement 7 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 8

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services (e.g., training, maintenance, waste management, environmental protection, industrial safety and hygiene, radiological protection and health physics, emergency preparedness, fire protection, quality assurance, criticality safety, and engineering) are adequate for operations.

Are the following prerequisites approved, in place, and ready for review?

- ☐ 1) Maintenance procedures
- ☐ 2) Management assessment program
- ☐ 3) Preventive maintenance and evaluation program
- ☐ 4) Calibration program
- ☐ 5) Radiation safety programs
- ☐ 6) Emergency preparedness program and procedures
- ☐ 7) Environmental Compliance assessment
- ☐ 8) Quality assurance program
- ☐ 9) HAZCOM program
- ☐ 10) Health and safety plan
- ☐ 11) Baseline hazard assessment
- ☐ 12) Management Self-Assessment of Phase V Storage Facilities

The prerequisites for Core Requirement 8 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 9

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

Are the following prerequisites approved, in place, and ready for review?

- ☐ 1) Records and audits of drills
- ☐ 2) Emergency operations and response training records
- ☐ 3) Emergency operation and drill program

The prerequisites for Core Requirement 9 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 10

An adequate start up or restart test program has been developed that includes adequate plans for graded operations testing to simultaneously confirm operability of equipment, the viability of procedures, and the training of operators.

This core requirement will not be reviewed because the addition of the additional storage buildings, and change to the Safety Basis constitute a modification to the CWC facility as opposed to a new start up or restart

Core Requirement 11

Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management responsible for control safety.

Are the following prerequisites approved, in place, and ready for review?

___ 1) Organization Chart with clear lines of command

The prerequisites for Core Requirement 11 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 12

The implementation status for DOE Order 5480.19, conduct of operations requirements for DOE facilities, is adequate for operations.

Are the following prerequisites approved, in place, and ready for review?

___ 1) Conduct of Operations policy/procedure

The prerequisites for Core Requirement 12 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 13

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

Are the following prerequisites approved, in place, and ready for review?

___ 1) Staffing Plan.

The prerequisites for Core Requirement 13 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

Core Requirement 14

A program is established to promote a site-wide culture in which personnel exhibit awareness of public and worker safety, health, and environmental protection requirements and, through their actions, demonstrate a high priority commitment to comply with these requirements.

[This core requirement is not unique to the Phase V Storage buildings or the change to the Safety Analysis Report and the ISB. The core requirement will not be reviewed.]

Core Requirement 15

The facility systems and procedures, as affected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.

Are the following prerequisites approved, in place, and ready for review?

- ☐ 1) CWC ISB Compliance matrix
- ☐ 2) USQ evaluations relative to implementation of the Phase V Storage Buildings.
- ☐ 3) Completed construction checklist for Phase V Storage.

There are no Prerequisite Checklists for Core Requirements 10, 14, 16, 17, 18, and 20, as they have been determined unnecessary per the DOE-RL approved Plan of Action.

Core Requirement 19

The technical and management qualifications of contractor personnel, responsible for facility operations, are adequate.

Is the following prerequisite approved, in place, and ready for review?

- ☐ 1) Training and qualification records includes 2404 series buildings and associated revised ISB limits.

The prerequisites for Core Requirement 19 appear to have been met and are ready for ORR commencement.

Signatures:

Group Leader / Team Member(s):

APPENDIX B: CRITERIA AND REVIEW APPROACHES

All Criteria and Review Approaches are to be conducted within the defined Scope. All references to "the facility" apply to CWC's Phase V Storage facilities only. All references to the "authorization basis" apply to the CWC Interim Safety Basis.

PHASE V STORAGE ORR IMPLEMENTATION PLAN HNF-SD-WM-IP-011, Rev. 0 Page B1

Core Requirement 1

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

Interpretation:

Procedures include Facility Operating (process and utility), Alarm Response, and administrative procedures. This Core Requirement requires a review of the procedure changes made as a result of the Phase V Storage being added to the CWC. Authorization basis documents include Technical Safety Requirements (TSRs) Administrative Controls (AC) and Criticality Prevention Specifications (CPS). The review will verify changes to these documents have been implemented in facility procedures. Authorization basis documents are to be assessed under Core Requirement 4. Acceptance Test Procedures (ATPs), Operational Test Procedures (OTPs), and Surveillance procedures are to be addressed under Core Requirement 5. Facility initial startup procedures are to be assessed under Core Requirement 10.

Criteria:

1. There is an adequate number of up-to-date procedures in place which support the operating status of the facility.
2. Operating procedures adequately and correctly incorporate the identified ACs, TSRs, and CPSs for operating process and utility systems.
3. Procedures provide operability and availability requirements for all systems and equipment.
4. Technical details are correct and consistent between procedures, drawings, system descriptions, training, etc.
5. Operating, Alarm response, and emergency operating procedures are adequately linked and consider the emergency plan.
6. Operating procedures reflect the current configuration of systems.
7. Procedures, as applicable, address normal and off-normal events.
8. All safety basis requirements set forth in the ISB have been implemented into operating procedures as appropriate.
9. Procedures adequately describe all alarm conditions and response actions.
10. A program is in place that ensures the periodic review, revision, and approval of procedures.
11. A program is in place that provides a visible means to ensure evaluation and approval of temporary changes, by management and/or engineering, and timely removal when the purpose is superseded.
12. Controls are established and implemented that ensure only current and accurate procedures are available for distribution and use by plant personnel, including their use in training programs.

13. As part of the process for maintaining procedures current and accurate, time is provided for training before significant procedure changes are put into effect.
14. A process is in place which requires users of procedures to inform procedure writers of errors in procedures or difficulty in using procedures, and suggestions for improving procedure content or format.
15. A program is in place to ensure that regulatory-type commitments are reflected in procedures and remain in effect.
16. The Plant is properly labeled and labels/procedures match.
17. All procedures and procedure changes are written in accordance with the approved writers guide.
18. Procedures are verified and validated prior to use.
19. Procedures are clear, concise, and contain adequate information for users to understand and perform their activities effectively.

Approach:

1. Review the Plant Operating Procedures. Assure that the procedures were prepared in accordance with the Writers Guide and incorporate the ISB Technical Safety Requirements, Administrative Controls, and the Critical Safety Evaluation Report requirements.
2. Ensure procedures depict current facility/equipment configuration including all labeling, and envelope operation of all required systems and anticipated plant processing configurations.
3. Review procedures to assure operating modes, include emergency conditions and recovery from process upset. Assure alarm response guidance and equipment/component labeling provides for appropriate personnel response and system recovery.
4. Observe operations for startup, operation, and shutdown. (This should be conducted with the process testing of Core Requirements 5 and 10, or the on-the-job training (OJT) and/or performance demonstrations of Core Requirements 2 and 3.)
5. Confirm that the requirements of Solid Waste Disposal Operations Administration (WHC-CM-5-34) and Plant Operating Procedures Writers Guide (WHC-IP-0673 Rev. 1) are implemented for procedure review, revision, approval, temporary changes, currency, validation and walk down prior to use.
6. Review current Solid Waste Management Operations Manual procedures to assure they reflect Phase V.
7. Verify the facility has properly implemented SRIDS requirements for procedures.

Basis:

It is essential that procedures are clear, concise, and valid to assure successful process operations and worker safety. If operations are based on incorrect system and equipment configuration, safety cannot be ensured. To ensure the safety envelope is maintained for this Hazard Category 2 facility, procedures must implement correct ACs and CPSs during normal and off-normal events. To assess the adequacy of operating procedures, the RT must determine if the Phase V Storage facilities' operating procedures properly control the plant configuration and meet the requirements of the ISB, TSRs, and CSER.

References:

1. WHC-CM-5-34, Solid Waste Disposal Operations Administration:
Section 3.22, Operations Procedures
Section 3.16, Alarm Management
2. CWC Interim Safety Basis
3. WHC-IP-0673, Solid Waste Disposal Plant Operating Procedure Writers Guide
4. 10CFR820.120
5. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)

Core Requirement 2

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).

Interpretation:

The Core Requirement applies to facility-specific qualification programs established for operations and direct support personnel (Facility Emergency Response Personnel, Engineering Personnel, Environmental Compliance, Fire Protection, Maintenance, Quality Assurance, Health Physics, Training, Industrial Hygiene, Industrial Safety, Nuclear Safety, Laboratory Support, Security, Records Management/Configuration Control, and Occurrence Reporting).

Adequacy of exams, exam results, and personnel level of knowledge are to be assessed under Core Requirement 3. Adequacy of staffing levels is to be assessed under Core Requirement 13. Adequacy of management training and qualification is to be assessed under Core Requirement 19. Training requirements of non-facility emergency response personnel (e.g., fire department, ambulance, hazmat team, etc.) will be assessed under Core Requirement 8.

Criteria:

1. Procedures are developed and implemented that describe the qualification process.
2. Procedures include examination requirements for certification of operations and maintenance personnel, requalification, maintenance of proficiency, granting of exceptions and extensions, alternatives to educational requirements, remediation, and evaluations by facility and training management.
3. Goals, objectives, and plans are in place to describe the implementation of the training and qualification programs.
4. Classroom training is conducted in accordance with formal lesson plans based to established learning objectives.
5. Written and oral examinations are used to evaluate trainee comprehension of training content.
6. Training programs incorporate formal on-the-job training (OJT) and hands-on evaluation of skills.
7. The qualification program includes requirements for successful completion of written, oral, operations evaluations for operations and maintenance personnel.

8. Procedures are in place to ensure that non-resident personnel have received the proper training for escorted and unescorted access to the CWC and are current in their training requirements.
9. The tasks required for the personnel working in the CWC are identified and documented through a systematic analysis of job requirements.
10. The training program is based on the results of this analysis. Learning objectives are derived from the analysis.
11. Requirements for continuing training have been adequately defined and programs have been developed.
12. Continuing training includes conduct of realistic drills to maintain proficiency in responding to abnormal and accident situations, including those involving radiological and dangerous waste hazards.
13. Training programs for operations and maintenance personnel include training on the requirements contained in the approved operating basis for the facility.
14. Training programs for operations and maintenance personnel emphasize the importance of compliance with procedures and safety requirements.
15. Training for technical staff personnel is based on an assessment of position duties and responsibilities associated with operating the CWC.
16. The training department uses post-training feedback, internal evaluations (self assessment), and operating experience to modify the training program when needed. This includes:
 - o Using feedback on training effectiveness from trainees and supervisors
 - o Incorporating feedback from operating experience at the site and from other DOE sites
 - o Conducting formal reviews of training effectiveness
 - o Incorporating comments from line management self-assessments and other audits.

Approaches:

1. Review training and qualification records for operators, maintenance personnel, shift technical engineers, and supervisors, including results of written, oral, and operational evaluations, to ensure the training program is being formally administered.
2. Verify 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 or certification.

3. Review the evaluation and self-assessment program for involvement by facility and training management in program, instructor (classroom and OJT), and training materials assessment.
4. Review the remedial training program for adequacy.
5. Review the CWC access control procedures for positive control of non-resident personnel.
6. Review the written goals and objectives related to the implementation of the training and qualification processes and ensure they are documented in strategic plans and that the goals and objectives adequately address the current issues that are important to both contractor management and DOE.
7. Review operations and maintenance lesson plans for incorporation of safety requirements, technical safety requirements, operational safety requirements, and procedure compliance.
8. Review trainee feedback forms, training evaluations of lessons learned from operating experiences, and formal training program reviews to verify feedback is addressed in a formal manner.
9. Review the continuing training program plan and drill schedule to verify its adequacy to support safe operations.
10. Review the systematic analysis of job requirements conducted to provide reasonable assurance that all tasks essential to safe and efficient operation of the CWC are addressed by the training program.
11. Verify that subject matter experts, line management, and training staff developed and maintain a valid CWC operations task list as the basis for the training program.
12. Verify that the current facility safety analysis report, operating procedures, technical and professional references, and facility/industry operating experience are used to identify training content and information for use in developing training materials.
13. Review the degree to which on-the-job training and hands-on evaluations for operations and maintenance personnel are used to reinforce classroom activities.
14. Interview training personnel to determine if they have sufficient experience and qualifications for assessing operations and maintenance personnel.
15. Interview training personnel responsible for training, and drill scenario development and implementation.
16. Interview personnel responsible for establishing training needs for operations and maintenance personnel.
17. Observe operator, operations support personnel, or supervisor examinations, by attending oral or operational evaluations (OJT), if possible.

18. Verify that personnel demonstrate knowledge of activities and evolutions that were included in their training program.
19. Observe operator and maintenance personnel response to drills.
20. Evaluate a training classroom lecture or field training activity for technical and administrative adequacy.

Basis:

State and Federal laws and regulations require specific training programs to be developed and implemented. This review will ensure that Federal and State requirements, as well as best management practices, are implemented.

References:

1. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.8, Training Administration
Section 3.10, On-the-Job Training
2. WHC-IP-0867, Operation Training Materials Development Guidelines
3. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)

Core Requirement 3

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.

Interpretation:

This Core Requirement is to ensure operations and direct support personnel (Facility Emergency Response Personnel, Engineering Personnel, Environmental Compliance, Fire Protection, Maintenance, Quality Assurance, Health Physics, Training, Industrial Hygiene, Industrial Safety, Nuclear Safety, Laboratory Support, Security, Records Management/Configuration Control, and Occurrence Reporting) are technically competent in all aspects of their assigned duties.

The adequacy of management personnel is to be assessed under Core Requirement 19. Training requirements of emergency response personnel outside of the facility (e.g., fire department, ambulance, hazmat team, etc.) will be assessed under Core Requirement 8.

Criteria:

1. The level of Phase V Storage operations and direct support personnel's knowledge, skill, and abilities are adequate to operate in compliance with the CWC operating and administrative procedures, as evidenced by selective interviews of personnel, review of examinations and examination results by the RT.
2. Examinations given to personnel are adequate in their depth and breadth of subject matter as it pertains to the operation under review and the assigned duties of personnel.
3. On the job observations of selected operations and operations support personnel convey the impression that personnel are competent and able to operate the storage facilities in accordance with all applicable procedures.
4. Exams are based on current, technically descriptive documents such as procedures, ISB, vendor information, facility drawings, and hazard analysis.

Approach:

1. Review and assess test material to verify it adequately reflects training content. Verify pass/fail criteria for test material is clearly defined, with results utilized in determining personnel qualifications.
2. Review and assess test material to verify it adequately tests for an understanding of system capabilities, limitations, and procedures.
3. Conduct interviews with operations personnel to verify they have an adequate understanding of technical fundamentals, procedures, procedure compliance, allowed emergency actions, ACs, and CPSSs.

4. Observe operations during Core Requirements 5 and 10 to evaluate the effectiveness of training.
5. Ensure facility personnel are trained on current fire and emergency information and are knowledgeable of their responsibilities during emergency conditions.
6. Interview personnel to determine their knowledge of information regarding the various types of facility hazards and stop work authority.

Basis:

The Defense Nuclear Facilities Safety Board (DNFSB) Recommendations 90-4, 91-3, 91-4, 92-3, and 92-6 delineated the important facets of a readiness review. These included assessment of the level of knowledge achieved during operator qualification programs as evidenced by review of exam questions and results and by selective observations of plant operations and by interviews of operators by the readiness review group.

References:

1. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.8, Training Administration
Section 3.10, On-the-Job Training
2. WHC-IP-0867, Operation Training Materials Development Guidelines
3. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)

Core Requirement 4

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.

Interpretation:

This Core Requirement requires a review of all safety documentation. Configuration management is assessed under Core Requirement 8.

Criteria:

1. The authorization basis for operation has been established, reviewed, and approved.
2. Systems and support systems to be operated within authorization basis.
3. Documentation provides for the protection of the worker and the public.
4. Documentation is in accordance with applicable administrative and regulatory requirements for this type of facility.
5. A program is in place that identifies workplace hazards and the information is used in planning and conducting facility work.

6. A program is in place to update the ISB and to evaluate impact of changes or errors to the authorization basis.

Approach:

1. Ascertain that the authorization basis has been reviewed and approved by the proper organization based on the approval designator.
2. Review operating, maintenance, and administrative procedures to determine if the operation described is in within the limits of the authorization basis and proper controls are provided to maintain those limits.
3. Review selected procedures to ascertain that the requirements of the authorization basis are noted as appropriate.
4. Review documentation to ascertain that requirement for worker safety as it relates to industrial, hygiene, radiological safety, has been established.
5. Review the configuration control program to determine if changes include an evaluation for worker safety and authorization basis impact.
6. Verify a program is in place that identifies workplace hazards and the information is used both in planning the work tasks and used by operating personnel in conducting work.

Basis:

Expert judgment, applicable DOE Orders and industrial standards are the primary basis for the above criteria and approach.

References:

1. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.3, Fire Protection Program
Section 1.14, ALARA Program
Section 1.15, Safety Analysis
Section 2.1.7 Criticality Safety
2. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)

Core Requirement 5

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.

Interpretation:

This Core Requirement applies to Acceptance Testing, Operational Testing, safety related system operability and condition tests, and Surveillance

program. The Maintenance Program and Calibration Program will be assessed under Core Requirement 8.

Criteria:

1. An adequate surveillance program is in place. Adequate documentation to support the implementation of this program is maintained.
2. An adequate test program is in place. Adequate documentation to support the implementation of this program is maintained.
3. All safety systems and safety related process and utility systems are operable and available.
4. Acceptance Test Procedures have been completed and documented for all facility systems.
5. Operational Test Procedures have been completed and documented for all facility systems.
6. The configuration management, maintenance, operation, environmental compliance, and radiological programs document program requirements and organizational responsibilities for testing, inspecting, surveilling, performing corrective and preventive maintenance, modifying and post-maintenance testing of systems for the Phase V Storage area.
7. Review of completed surveillances and/or tests are conducted to ensure that acceptance criteria are met and any trends are identified.
8. ATPs and OTPs contain acceptance requirements delineating the minimum standards acceptable for components and/or systems as appropriate.
9. Administrative controls are established to maintain test records.

Approach:

1. Review the implementing procedures to assure that the worker safety aspects are addressed and that the responsible technical support staff for the procedures are knowledgeable of the requirements.
2. Review surveillance procedures to assess if the appropriate amount of rigor is being applied for this type of facility.
3. Review ATPs and OTPs to verify the adequacy of the administrative control program for test record retention and retrieval process, documentation for completion of testing and operational turnover. Verify that all tests were reviewed and approved by appropriate organization and departments.
4. Interview configuration management, maintenance, operation, environmental compliance, and radiological controls personnel to verify an adequate understanding of test, inspection, surveillance, corrective and preventive maintenance, modification and post-maintenance testing responsibilities, including a working knowledge of the various organizational interfaces and flow of information/data.

5. Verify ATPs and OTPs have acceptance criteria defined, and the testing verified that they were met.
6. Ensure authorities are identified that can approve changes. Confirm that the configuration management control processes include the development of operational history documentation that can be used to help provide guidance to assure mission success.
7. Review operability of: Critical systems; Compressed Air System; Fire Suppression System; Radiation Detection and Control Devices.

Basis:

All elements of the operating program, including procedures and training, should be adequate to assure continued systems operability and to keep design limits visible to plant personnel and assist in fostering an effective safety culture. It is important to verify that proper operability acceptance criteria were used in turnover tests and that these criteria are effectively documented. Standard industry practice requires proper documentation of acceptance criteria in procedures, and verification that operating limiting conditions meet all functional design requirements.

References:

1. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section SWD-4-2, Quality Assurance
Section SWD-6-1, Standard Engineering Practices
Section SWD-6-2, Project Management
2. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.9, Quality Assurance Program
Section 1.13, Processing and Transferring Records
Section 3.13, Control of Equipment
4. WHC-IP-1026, Engineering Practice Guidelines

Core Requirement 6

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.

Interpretation:

This Core Requirement is not unique to the Phase V Storage buildings or to the change to the CWC Authorization Basis by the implementation of the ISB. However, since the entire program for CWC was recently reviewed by the Facility Evaluation Board (FEB), the facility is in the middle of the corrective action plan for the findings during that review. The scope of the review for this ORR will be limited to the status and implementation of Corrective Action Plan developed as a result of the FEB assessment.

Criteria:

- 1) A system for identifying, reviewing, cataloging, and resolving deficiencies and recommendations is adequately implemented. (5480.19, CH VI and VIII; 5700.6C, para 9.b(1)(c), 9.b.(3)(a)).

Approach:

- 1) Review the Corrective Action Plan developed as a result of the FEB assessment of December 1996, at CWC.
- 2) Verify implementation of the Corrective Action Plan to date has effectively addressed and rectified nonconformances identified in the FEB Assessment.

Core Requirement 7

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

Interpretation:

This Core Requirement is to review and assess the facility's performance of a compliance review against RFSH contractual requirements.

Actual verification of compliance with RFSH contractual requirements is performed under all other Core Requirements.

Criteria:

1. A compliance assessment has been completed, non compliances have been identified, and schedules for gaining compliance have been made.

Approach:

1. Review and assess documentation of the facility's compliance assessment.
2. Review and assess corrective action schedules.
3. Review and assess efforts to meet corrective action schedules.

Basis:

The Core Requirement stems from a DNFSB recommendation which requires DOE nuclear facilities to identify the specific standards and requirements considered applicable to the design, construction, operation, and decommissioning of the facility. The recommendation also requires conformance to identified standards and requirements.

References:

1. DNFSB Recommendation 90-2, Requirements Information Document

Core Requirement 8

Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services (e.g., training, maintenance, waste management, environmental protection, industrial safety and hygiene, radiological protection and health physics, emergency preparedness, fire protection, quality assurance, criticality safety, and engineering) are adequate for operations.

Interpretation:

This Core Requirement requires review of support services management programs, personnel, facilities, and equipment, which were established and procured specifically for the facility being reviewed. As an example, a training office and managing staff established for the facility is within the scope of the review, but the rest of RFSH and FDH training department is not within the scope of the review. Staffing is assessed under Core Requirement 13.

This Core Requirement has been broken into 12 twelve separate sub Core Requirements and each one will be individually reviewed as outlined below.

8.1.

There is an adequate emergency preparedness organization and program.

Criteria:

1. Emergency and off-normal procedures effectively guide personnel in responding to single and multiple events.
2. An approved emergency plan and supporting documents exist and have been tested to ensure effective emergency preparedness and response. Provisions are in place to upgrade the Emergency Plan based on lessons learned from drills, exercises and actual emergencies. The emergency plan incorporates required emergency preparedness program features.
3. Facility Emergency Response personnel are trained to effectively respond and mitigate the consequences of emergencies (assessed under Core Requirements 2 and 3, provided here for information and completeness). Facility non-emergency response personnel are adequately trained on emergencies situations (assessed under Core Requirements 2 and 3, provided here for information and completeness). Non-facility emergency response personnel are aware of the change in the CWC facility status.
4. Facilities, equipment, and resources are in place and adequate to support emergency response operations and ensure the protection of all personnel (e.g., Emergency Operations Center, backup or alternative facilities, primary and backup communication, alarms adequate to notify personnel, transportation, medical treatment, respiratory equipment, exposure controls, instrumentation to measure exposure, etc.)
5. Provisions and procedures are in place to support correct classification of emergencies, assessment of consequences, notification of emergency response personnel, and to recommend appropriate protective actions.
6. Hazards assessments are prepared, documented, and maintained which considers emergency events that could affect Phase V Storage.
7. Individuals and alternates are designated to perform all emergency roles using clear lines of succession.

Approach:

1. Interview individuals responsible for implementation of the emergency preparedness program. Ensure that the emergency preparedness program includes the necessary elements of staffing, management support, resources, training, and planning, to cope with emergencies.
2. Review procedures (operations, maintenance, surveillance, RADCON, administrative, etc.) to verify that emergency and off-normal event are sufficiently linked to the emergency plan. Through discussions with operations personnel and facility managers, confirm knowledge of emergency/off-normal operating procedures. During conduct of the ORR, evaluate how personnel utilize procedures during event drills.

3. Review the Emergency Plan and supporting documentation and compare to the requirements of the ISB, Health and Safety Plan (HASP), Hazards Baseline Assessment, TSR, and CSER. Ensure that provisions are in place to incorporate drills and actual emergency lessons learned into the Emergency Plan.
4. Review procedures and training material for non-facility emergency response personnel (e.g., fire department, ambulance, hazmat team, security, etc.) to assure Phase V Storage has been included.
5. Review the Emergency Plan for commitment and definition of facility, equipment, and resources for emergency response. Conduct a site walk through to ensure medical, fire, hazmat, radiological response, and monitoring equipment are in place. Review surveillance procedures for emergency response equipment to ensure their continued maintenance and ensure up-to-date contact names and telephone numbers are provided at all times.
6. Interview personnel responsible for classification of emergencies to determine if the classification scheme is consistent with operating procedures and technical specifications.
7. Perform walk down of facilities and equipment, review procedures and interview appropriate onsite and, as necessary, offsite personnel to verify that provisions are adequate and in place for transportation and treatment of contaminated/injured personnel, fire/rescue support, and protection of security personnel during emergencies.
8. Review Hazard Analysis to ensure a comprehensive hazard assessment has been conducted and that the emergency plan is responsive to the full spectrum of accidents.
9. Review procedures (operations, maintenance, surveillance, RADCON, administrative, etc.) to verify that emergency and off-normal event are sufficiently linked to the emergency plan. Through discussions with operators and operations managers, confirm operator knowledge of emergency/off-normal operating procedures. During conduct of the ORR evaluate how personnel utilize procedures during event drills.
10. Ensure up-to-date contact names and telephone numbers are provided at all times.

Basis:

An effective emergency preparedness, and response program is necessary to help ensure the safety and health of workers, public, property and environment in the event of an emergency. Emergency management programs should be in place to enable organizations to respond to an emergency in a timely, efficient, and effective manner, resulting in mitigation of consequences and recovery. Hazard assessments are to be used as the basis of the emergency preparedness program.

References:

1. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section 4-43 Emergency Management Resources
2. WHC-CM-5-34, Solid Waste Disposal Operations Administration

- Section 1.18, Occurrence Reporting and Processing
3. WHC-IP-1233, Rev 0, Solid Waste Disposal Micro S/RIDS
 4. WHC-IP-1120, Rev 4 Standards/Requirements Identification Document (SRIDS)
 5. ISB
 6. HASP
 7. Baseline Hazard Assessment
 8. TSR and CSER

8.2

There is an adequate engineering support organization and program including the cognizant/system engineer approach.

Criteria:

1. The organizational structure is clearly defined and staffing and resources are sufficient to accomplish tasks assigned to the organizational elements. (Assessed under Core Requirement 11, provided here for information and completeness)
2. Adequate facility specific training, is provided to the engineers. (Assessed under Core Requirements 2 and 3, provided here for information and completeness)
3. Responsibilities, authority, and interfaces for each organizational position are clearly defined and understood. (Assessed under Core Requirement 11, provided here for information and completeness)
4. Goals, objectives, and standards for performance of engineering support activities are adequately established, communicated, and reinforced. (Assessed under Core Requirement 11, provided here for information and completeness)
5. The effectiveness and level of expertise of engineering support are periodically and adequately assessed. (Assessed under Core Requirement 13, provided here for information and completeness)
6. Actions and controls within engineering support demonstrate that configuration control is maintained and a configuration management system is in place that ensures drawings, procedures, safety equipment lists, ISB, training materials, etc. are kept current. (Assessed under Core Requirement 8.13, provided here for information and completeness)
7. Procedures and controls that ensure safe and reliable operations are adequately employed in the conduct of engineering activities.
8. Standard engineering practices, principles, convention, and approaches are employed.

Approach:

1. Obtain and review programs, processes, and procedures which control engineering work and confirm appropriate checks and balances exist which would preclude or correct errors (e.g., design, procedure, etc.), standard engineering practices and approaches are employed.

2. Interview engineering support personnel to confirm their understanding of governing and applicable programs/procedures. Include confirming their knowledge of applying these programs and procedures.
3. Through discussions with maintenance, operations, and management, develop an understanding of the adequacy of engineering. Determine backlog of work and the time to complete. Determine if responsibility for completing work is clearly defined.

Basis:

It is industry practice to establish an engineering support organization which clearly defines its management authority, responsibility, and accountability and which serves to provide the technical expertise necessary to support the needs of operations, maintenance, and facility management personnel.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Internal Requirements
 - Section 1-5, Standard Operating Practices
 - Section 4-2, Quality Assurance
 - Section 4-27, Radiological Control Practices and Procedures
 - Section 4-29, Nuclear Criticality Safety
 - Section 6-1, Standard Engineering Practices
 - Section 8-7, Operations Support Services
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
 - Section 1.9, Quality Assurance Program Plan
 - Section 1.14, ALARA Program
 - Section 1.24, Unreviewed Safety Questions
 - Section 2.1, Configuration Change Control
 - Section 2.2, Solid Waste and T Plant As-Built Drawing Control
 - Section 2.3, Technical Notebooks
 - Section 2.4, Configuration Management
 - Section 2.11, Job Control System
 - Section 2.17, Criticality Safety
 - Section 3.1, Material Control
4. WHC-IP-1026, Engineering Practices Guidelines

8.3

There is an adequate environmental protection organization and program, to include Air Quality, Surface Water, Groundwater, Solid and Hazardous Waste, Hazardous Material Handling, Environmental Monitoring, Hazardous Substance Release Reporting, and Environmental Protection Quality Assurance.

Criteria:

1. Environmental Compliance programs are defined in formal policies, standards, and procedures.
2. A plan for monitoring air-effluent sources has been formalized in a document and has received appropriate review and approval.
3. There is a formal waste program that describes procedures, roles, and responsibilities for identifying, characterizing, and managing all waste streams.
4. There is a formal waste minimization program and plan.
5. There is a formal program that defines the use of chemicals and toxic materials. Inventory control procedures are in place for monitoring and limiting the type and quantity of chemicals and toxic materials purchased. Procedures are established and implemented to prevent the release of toxic chemical materials to the environment.
6. There are response action plans or equivalent documents that outline the nature and scope of the response action program and outline the specific responsibilities for, and procedures to assess, all releases potentially subject to reporting and notification requirements.
7. All required permits for construction and operations are possessed and associated requirements in effect (e.g., air, water, waste, TSD, etc.).
8. All environmental reviews and studies have been performed (e.g., NEPA, etc.)
9. A system is in place and implemented to provide estimates of quantities and assess the integrated impact of releases of hazardous material on personnel, the public, and the environment.
10. Hazardous substances are monitored, sampled, and analyzed in order to support making notifications and reporting reportable quantities to authorities.
11. Environmental sampling programs are conducted to establish a baseline for radioactivity in the environment in the vicinity of Phase V Storage for use as a basis of comparison in the event of an excursion involving the plant.
12. Equipment and resources for sampling and analysis of environmental media are in place to provide assurance that significant releases from Phase V Storage are not occurring and radioactive or hazardous materials are not

accumulating in the environment. Verify the data can be analyzed in a timely manner.

13. Procedures are in place that describe how to operate the equipment used to sample and analyze.
14. Personnel in Environmental Compliance have the needed knowledge, skills, and abilities to conduct the program. (assessed under Core Requirements 2 and 3, provided here for information and completeness)
15. Phase V Storage impact has been assessed by independent monitoring groups and appropriate actions have been taken to accommodate.
16. Intra-building waste movements are made under a documented control system that provides for positive tracking of package movement, and movement approval.

Approach:

1. Verify that all procedure (normal and off-normal) that could impact the environment are reviewed by CWC Environmental Compliance.
2. Review documentation, interview staff, and make field observations to ensure the CWC Environmental Compliance program address all activities necessary to implement PHMC environmental policies.
3. Verify that Environmental Compliance procedures are technically correct, current, and have a level of detail appropriate for the activities to which they apply.
4. Review the air quality program to ensure that CWC has a plan for monitoring air-effluent sources which has been formalized in a document and has received appropriate review and approval.
5. Verify that Spill Prevention, Control, and Countermeasures (SPCC) plans are reviewed for applicability to Phase V. Plans must be reviewed and recertified at least every three years, but should be reviewed and amended at any time when substantive changes may occur. Verify SPCC and BMP plans contain specific spill reporting instructions as required by the applicable regulation.
6. Verify that spill plans which involve emergency responses and notification, that up-to-date contact names and telephone numbers are provided for the proposed startup date.
7. Review documentation, make field observations, and interview staff to verify that there is a formal, facility-wide waste program in place which describes procedures, roles and responsibilities for identifying, characterizing, and managing all Phase V waste streams.
8. Review documentation, make field observations, and interview staff to verify that there is a formal waste minimization program and plan for Phase V.

9. Review documentation, interview staff, and make field observations to verify that inventory control procedures are in place for monitoring and limiting the type and quantity of toxic and chemical materials purchased, and that procedures are established and implemented to prevent the release of toxic and chemical materials to the environment.
10. Verify that procedures for operating monitoring, sampling and laboratory analyses equipment have been developed, reviewed, approved, and issued, to insure they are appropriate for the constituent(s) being monitored.
11. Review procedures and observe operations of equipment used for sampling, monitoring, and analyzing hazardous substances to verify that the facility has the ability to determine if releases are occurring, can collect data for notification and reporting as directed by Federal and state requirements and can characterize waste.
12. Verify that the pre-operational baseline assessment of environmental radioactivity levels has been reviewed to ensure that measurable changes in radioactive levels, which are significant per regulatory basis, can be determined.
13. Verify that all Phase V environmental permits and studies are complete; and no additional permits or studies are required. Verify that all identified permit requirements and actions have been completed or are captured within the CWC compliance program.
14. Coordinate verification of criterion 14 with reviews conducted on Core Requirements 2 and 3.
15. Verify that corrective actions identified by the Facility Evaluation Board have been closed, or suitably dispositioned.
16. Verify administrative controls for intra-building waste movements are issued and applicable to Phase V implementation.

Basis:

Various sections of 40CFR, 49CFR, WAC 173, WAC 197, and WAC 246 require the preparation of an environmental management program which should include all procedures necessary to establish and implement an effective environmental program.

Regulations promulgated under the Resource Conservation and Recovery Act require solid, hazardous, and mixed waste be characterized and managed in a manner to ensure safe accumulation, storage, treatment, and/or disposal of such wastes.

DOE Order 5500. 2B, Emergency Categories, Classes, and Notification and Reporting Requirements, requires immediate notification of DOE Headquarters Emergency Operations Center and the National Response Center as soon as possible (within 24 hours) after discovery of a hazardous material spill or release to the environment (in excess of reportable quantities) as a result of DOE operations.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section 2-14, Hazardous Material Packaging and Shipping
Section 4-2, Quality Assurance
Section 5-16, Solid Waste Management
Section 7-5, Environmental Compliance
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.9, Quality Assurance Program Plan
Section 1.12, Hazard Communication Program
Section 1.16, Hazardous Material Packaging and Transportation
Section 1.28, Waste Generation and Control
Section 3.3, EPCRA 312 Chemical Inventory Release Reporting
Section 3.4, Chemical Release Reporting

8.4

There is an adequate fire protection program.

Criteria:

1. The Hanford Fire Department is cognizant of CWC's needs and have taken appropriate actions to meet.
2. Administrative procedures are established to control specific fire hazards.
3. All facility fire hazards are identified and evaluated on a continuing basis. A Fire Hazard Analysis is documented and complete.
4. Requirements of NFPA and Life Safety Code are specified, implemented, and maintained.
5. Fire protection systems and equipment are available as specified in fire protection program documents.
6. A pre-fire plan is in place and it reflects the current conditions in the facility.
7. A qualified cognizant individual is identified as the single point of contact for CWC's fire systems and fire protection program.
8. Procedures/policies provide for appropriate notifications of fire protection system outages.
9. Provisions are made for the proper storage of radioactive, flammable, and combustible materials.
10. Fire emergency procedures are established and implemented.
11. Means of controlling liquid run-offs from a credible fire are provided so that contaminated (including non-radiological containments) liquids, including potentially contaminated water resulting from fire fighting operations, will not escape to the environment.

Approach:

1. Identify and review procedures related to fire protection. Verify that procedures are in place for combustible and flammable materials, hot work including cutting and welding, smoking, and fire protection system impairments. Inspect existing conditions to determine implementation of the identified procedures.
2. Review the Fire Hazards Analysis to determine that all facility areas and fire hazards are included. Determine that operating parameters were considered, including unusual operations, ventilation requirements, maintenance activities, and radiation control parameters.
3. Review the fire protection program and assure the requirements for periodic review are identified. Review work control procedures to confirm

the requirement for independent safety review (fire protection) in the modification approval cycle. Interview engineering and Safety personnel to determine the level of understanding of the review process.

4. Verify that construction has implemented the Fire Protection requirements identified in Construction specifications through design and installation.
5. Inspect the facility to observe existing conditions for compliance to fire protection requirements, such as; 1) Proper portable fire extinguishers are mounted, marked and operable, 2) Activities site access is clear and unobstructed for emergency vehicle response, 3) Fire hydrants are accessible, 4) Exits are arranged and maintained to provide free unobstructed egress from the facility, 5) Exit routes are clearly marked and illuminated where required, 6) Emergency lighting is provided and operable where required, 7) Proper storage of radioactive, flammable and combustible material.
6. Interview the Fire Department to ensure they are cognizant of CWC's (in general) and Phase V Storage (in particular) needs and have taken all appropriate actions.
7. Ensure a Pre-Fire Plan is in place which adequately encompasses the facility.

Basis:

The fire protection program must be initiated by management to function effectively across all lines of facility operations. The fire protection program must address the specific hazards and incorporate the concept of "defense in depth." Fire protection systems must be designed to accomplish defined objectives.

References:

1. WHC-IP-1120, Rev 4, Standards / Requirements Identification Document (SRIDS)
2. WHC-CM-5-34, Solid Waste Disposal Operations Administration Section 1.3, Fire Protection Program

8.5

There is an adequate maintenance organization, program and work control system.

Criteria:

1. The Maintenance Program adequately defines organizational responsibilities for the maintenance process. The Maintenance Program adequately defines maintenance program elements including corrective maintenance, preventive maintenance, preventive maintenance schedules, instrument and calibration, temporary repairs, predictive maintenance, and maintenance of test equipment.
2. Technical support from engineering and other functional specialties is available and adequately specified to ensure: a) configuration management requirements are met, b) health and safety of the work force and protection of the environment are maintained during maintenance activities, and c) engineering performs failure analysis on significant equipment failures. The analysis should include a review of similar failures and design reviews as appropriate.
3. An adequate formal work control process provides:
 - a. Equipment deficiency identification, prioritization, corrective action tracking, and equipment history.
 - b. Formal work authorization, job planning, scheduling, and backlog measures.
 - c. Work controlled by written procedures using qualified personnel.
 - d. Post-Maintenance Testing (PMT) to assure equipment operability. Reworked, repaired, and replacement items are inspected and tested in accordance with the original inspection and test requirements or acceptable alternatives.
 - e. Clear definition of responsibilities for initiating work requests, approving completed work, and for ensuring that work is completed as scheduled, are in place.
4. Management has established standards for what is an acceptable amount of maintenance backlog and a system exists to control and review the open work backlog.
5. The maintenance backlog, for systems important to safe operation, is adequately managed and includes an effective review for safety implications and justification for continued operations.
6. Means are provided to ascertain the availability and operability of systems important to safe operations. Means are provided to ascertain any overdue preventive maintenance or calibration for these components.
7. Adequate staffing and resources are provided to assure quality work and work backlogs consistent with maintaining acceptable physical condition

(assessed under Core Requirement 13, provided here for information and completeness).

8. An effective procurement and material control process provides parts, spare parts, materials, equipment, supplies, tools, and services for work activities.
9. Responsibilities have been assigned for identifying, sourcing, processing, testing and inventory management of parts, spare parts, materials, equipment, supplies, tools, and services.
10. Traceable characteristics for parts, spare parts, materials, equipment, supplies, and tools (e.g., stock on hand, reorder mechanism, substitutability, detail specifications, shelf life, etc.) have been established and documented and are accessible to users in a timely fashion.
11. The supply of parts, spare parts, materials, equipment, supplies, tools, and services are adequate to support the facility and compatible with staffing levels.
12. Maintenance test equipment, tools, and supplies are compatible with the environmental conditions expected for normal and off-normal operations.
13. An adequate calibration and repair program is in place. Adequate documentation (e.g., calibration procedures) to support the implementation of this program is maintained.
14. Measurement and test equipment calibrations are traceable to national standards. The equipment control process has been validated, and adequate recall requirements have been specified to maintain calibration limits.
15. Instrument/equipment calibrations are maintained on schedule and documented as required by applicable procedures. All required instruments/equipment are calibrated.
16. Instruments/equipment are labeled or tagged or otherwise controlled to indicate due date of next calibration.
17. Instrument/equipment is calibrated at specified intervals based on the required accuracy, purpose, degree of usage, stability characteristics, and other conditions affecting the measurement.
18. Testing frequencies are based on approved TSRs.
19. Instrument "set-points" are maintained, traceable, and documented in a controlled manner, and ongoing testing requires documentation of "as found"/"as left" conditions.
20. Equipment maintenance history is maintained and used in maintenance planning.
21. A process is in place to collect information relevant to improved maintenance practices from vendor bulletins and other operating

experience, and to integrate this feedback into the maintenance programs.

22. An adequate maintenance performance assessment program has been implemented.
23. A process is in place that monitors maintenance rework, evaluates the cause of the rework, and determines what corrective measures are necessary to minimize the amount of rework.
24. Maintenance, work control, and material control personnel have the necessary knowledge, skills and abilities to adequately manage the respective programs. (assessed under Core Requirements 2 and 3, provided here for information and completeness).
25. Maintenance facilities, equipment, and tools are maintained in good condition.
26. Maintenance work areas are maintained in a clean and orderly fashion.
27. Contaminated tools will be segregated from clean tools. Reuse is stressed and supported by storage and tool control system.
28. Provisions are made for proper storage, segregation, and control of hazardous materials such as chemicals, reagents, explosives, and flammables.
29. Maintenance facility size, location, and arrangement promote safe and effective completion of work.
30. Suitable storage is provided for tools, supplies, jigs, and fixtures.
31. Suitable facilities are available to decontaminate tools and equipment.
32. Laydown areas are identified and controlled.

Approach:

1. Review technical manuals, maintenance procedures, operating procedures, etc. to identify parts, spare parts, materials, equipment, supplies, and tools.
2. Review the process/program used for determining/controlling parts, spare parts, materials, equipment, supplies, tools, material requirements, records control, procurement specifications, materials availability, storage locations, and special criteria for preventive maintenance or shelf-life.
3. Select a few critical parts, materials, supplies, and tools and review the procurement process to verify that appropriate specifications and use requirements were included.
4. Review the program for controlled storage and inventory management of critical equipment and consumables. Assure that required traceability is

identified consistent with the use of the item. Interview personnel working in maintenance, engineering, and work control to verify their knowledge of component storage and inventory management. If a computerized data base is available, select random line items and assess data completeness and integrity.

5. Conduct interviews with maintenance, operational, work control and engineering personnel to verify their knowledge of the work control process from identification of needed maintenance/modification through package preparation to field work completion. Review the prioritization process including utilization of schedules.
6. Review maintenance procedures and management policies to assure they include the requirements of the ISB, CSER, and mission objectives for the facility, processes/systems, and equipment operation. Assure they include guidance for identifying equipment deficiencies and controlling the prioritization, planning, scheduling, and authorization of work.
7. Review the project turnover remaining punchlist items and corrective maintenance items identified during OTPs and to determine appropriate inclusion into the work backlog list. Determine if the appropriate priority for corrective action was included and if responsible management are aware of the commitment.
8. Review management standards and goals related to maintenance backlog management to assure facility safety performance and process thruput commitments are included. Conduct an assessment of backlog reasonability in terms of aging, preventive/corrective maintenance mix, reasons for delay and potential implications for safe operations.
9. Verify that methods exist for prompt identification to operational personnel of inoperable equipment with appropriate incorporation into the maintenance program. Review process and procedures governing the "daily schedule" communication vehicle to ensure that appropriate management and support personnel are apprised of operations and maintenance problems affecting systems important to safe operations. Ensure that overdue preventive maintenance and calibrations are considered and included in equipment availability reporting.
10. Ensure a system is in place to inform operations of any unscheduled/emergency/accident situation "on or off facility" that may cause safety systems or safety related utilities to be completely or partially inoperative for any length of time.
11. Review maintenance packages to determine the adequacy of post maintenance testing. Ensure that tests clearly specify test instructions and acceptance criteria sufficiently to verify operability of components and systems.
12. Verify that an improvement process exists which allows feedback and corrective/improvement actions for incorporating recommendations from vendors, regulators, operating experience, operating history, lessons learned, and self-assessment audits.

13. Review maintenance program documentation and applicable procedures in maintenance and engineering to ensure that maintenance history is adequately maintained. Interview planners and cognizant engineers to assess the use of maintenance history for improving maintenance planning and evaluating the effectiveness of predictive and preventive maintenance tasks.
14. Review how Maintenance uses performance indicators, trending, trend analysis, lessons learned and root cause analysis to monitor maintenance rework and identify the cause of rework. Review the actions taken to reduce the amount of rework.
15. Review calibration records to ensure calibration, reference standards, and non-conformance requirements are controlled.
16. Review preventative maintenance and recalibration schedules and procedures to assure they are included appropriately for safe operation of the facility.
17. Review instrument test program/procedures in order to verify the instrument "set-points" are documented, controlled and maintained as necessary to support safe operation. Verify procedures require recording "as found" and "as left" conditions. Verify these procedures are subject to periodic scheduled reviews to establish they are still valid for plant conditions/configuration.
18. Determine if predictive maintenance is being considered to support mission objectives and thruput requirements and whether criteria are adequately specified for taking corrective actions.
19. Review Preventative Maintenance schedules to verify that the systems technical basis was utilized and facility safety and process thruput commitments were also included. Review performed PMs. Place special emphasis on reasons for any missed PMs, how the status of operable equipment is affected, how return to service is accomplished, and how procedures are changed to prevent problem recurrence.
20. Interview the maintenance manager to determine that an interface exists with appropriate communications methods from QA, engineering, operations, safety, and health physics. Assure communications include coordination between these technical support/functional groups and maintenance for integration of the quality assurance, configuration management, ALARA, and safety programs on site.
21. Walkdown maintenance areas and assess for adequacy (e.g., location, storage, material segregation, etc.)

Basis:

An effective program of preventive and corrective maintenance enhances availability and operability of equipment and provides data which can be used for continued improvements. An effective maintenance organization is necessary to retain the physical condition of Phase V Storage in a manner that supports safe operation. Maintenance equipment must be maintained and calibrated to ensure that maintenance activities are safe, effective, and

maintain configuration management controls. Specific controls are unique to maintenance activities which significantly impact safety and equipment reliability. Management's general approach to maintenance sets the organization's cultural bias toward safety and equipment availability. Prior to commencing operation of Phase V Storage, CWC must have their work control, procurement and material control systems operating effectively to ensure adequate work progress, continued operations, and facility safety.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
3. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
 - Section 1-5, Standard Operating Practices
 - Section 2-1, Procurement Manual
 - Section 2-3, Property Management
 - Section 4-2, Quality Assurance
 - Section 6-1, Standard Engineering Practices
 - Section 8-7, Operations Support Services
4. WHC-CM-5-34, Solid Waste Disposal Operations Administration
 - Section 1.9, Quality Assurance Program
 - Section 1.31, Scheduling
 - Section 2.1, Configuration Change Control
 - Section 2.4, Configuration Management
 - Section 2.11 Job Control System
 - Section 3.1, Material Control

8.6

There is an adequate quality assurance organization and program.

Criteria:

1. The quality assurance program is clearly defined and documented, has well defined interfaces and responsibilities, and includes a well defined system for audits, surveillances, document review, corrective action, and follow up. There are procedures for systematic reviews and audits, including self-assessments.
2. Quality assurance reports are distributed to the appropriate level of management. The reports reflect adequate and timely QA reviews.
3. Administrative controls are implemented by management to maintain control of the quality assurance program elements.
4. Acceptance/operational tests and inspections are verified to be accurate and complete for systems important to safe operations.
5. Calibration of measurement, test, and monitoring systems are ensured and verified.
6. The Quality Assurance program is effectively implemented through QA review and approval of procedures and work activities on safety class equipment and personnel safety items.
7. QA personnel have the necessary knowledge, skills and abilities to actively participate in the QA program. (Assessed under Core Requirements 2 and 3, provided here for information and completeness).
8. Software is adequately controlled.

Approach:

1. Identify and evaluate Quality Assurance Program documentation for adequacy and assess the facility for compliance to WHC-CM-5-34.
2. Review work packages to verify QA personnel approval when required.
3. Verify proper QA approval of procedures and oversight on specific work items.
4. Use WHC-CM-5-36, Chapter 4-2 and QR 19.0 to determine that the software is properly controlled and maintained.

Basis:

Experience in the DOE and commercial nuclear industry has shown quality assurance requirements are sometimes not fully implemented into effective QA Programs.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section 3-5, Document Control and Records Management
Section 4-2, Quality Assurance
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.9, Quality Assurance Program Plan

8.7

Health physics (HP) programs and procedures provide appropriate direction, effectively support safe operation of the facility, and ensure adequate protection of workers, the public, and the environment.

Criteria:

1. Organization and administration of the HP program ensures effective implementation and control of HP activities.
2. Personnel performing health physics duties have successfully completed HSRM training and qualification program. (Assessed under Core Requirements 2 and 3, provided here for information and completeness)
3. Programs to evaluate, monitor, and control internal and external radiation exposure, (e.g., dosimetry, exposure records, trend analysis, bioassay program, work area radiation records, procedures, etc.).
4. Programs to control radioactive material are effective in: 1) providing adequate packaging, labeling, accountability, and safe transportation of such material; and 2) minimizing the contamination of areas, equipment, and personnel.
5. Facility Radiological Work Permits (RWPs) are adequate to protect the worker, public, and environment. RWPs contain adequate provisions for protective equipment, work limitations, job descriptions, and special instructions. RWPs are posted at entrances to work areas. Out-of-date RWPs are removed in a timely manner.
6. Facility status boards adequately represent radiological conditions of the facility and provide enough information to personnel to allow safe operations and minimize exposure.
7. Facility posting is adequate to provide personnel with enough information to allow safe operations and minimize exposure. Posting is in accordance with all requirements.
8. An ALARA program has been established and successfully implemented. ALARA program has taken into account all facets of exposure reduction (e.g., posting hot spots, shielding, special tools, monitoring, traffic routing, location of office areas and work stations, protection from transient radiation, adequate communications).
9. Source material is adequately controlled, labeled, handled, shipped, received, and surveyed.
10. Fail safe interlocks are used, tested, and documented on radiation generating devices, and barriers are adequately used to ensure the safety of operators and other personnel.
11. Set points to activate interlocks or other safety systems associated with radiation generating devices are defined.

12. The radiation field around radiation-generating devices and radioactive material has been well characterized (type, energy, and dose range).
13. Warning signs are posted at radiation-generating devices.
14. Area radiation monitoring equipment are used for radiation generating devices.
15. Radiological protection/measurement instruments (fixed and portable)
16. Instruments have current calibration stickers and are in a recall system.
17. Instrumentation is adequate to meet facilities needs (range, type, location, number, air flow rate, etc.).
18. A documented, acceptable air monitoring program is in place, and is supported by sufficient studies (e.g., air flow patterns, particle size, etc.).
19. Contamination controls are adequate to protect the worker (e.g., PPE removal procedures are posted, contaminated and non contaminated areas are routinely surveyed, laundry procedures minimize contamination spread, airborne generating devices, such as fans and vacuum cleaners, are adequately controlled, personnel monitoring is adequate, decontamination facilities are available, proper engineered barriers, etc.).

Approach:

1. Review the organizational structure of the health physics group and its relationship to the line management structure. Determine if the organizational structure is clearly defined.
2. Interview the Health Physics Manager and staff members to determine if adequate resources are provided by consistent with the radiological risk of the facility as defined in the ISB and CSER.
3. Review operating procedures and health physics procedures to determine their adequacy in supporting normal, process upset, and documented emergencies. Assure they were prepared in accordance with the approved Writers Guide.
4. Determine if performance indicators will be used to assess the facility radiological control performance and how corrective actions will be identified and tracked.
5. Verify exposure records are maintained for appropriate personnel.
6. Review radiological survey procedures and techniques for the release of materials.
7. Review facility programs and procedures intended to reduce the volume of radioactive material generated from the facility.

8. Determine if personnel are aware of waste reduction policies and if waste collection containers are provided for clean waste and radioactive waste to minimize radwaste generated.
9. All areas are controlled to prevent the spread of contamination.
10. Tour facility and ensure all required posting, boundaries, radiation monitoring equipment are in place.
11. Review selected RWPs used in critical process areas for applicability, correct controls, accuracy, and completeness.
12. Tour facility and ensure all required status boards are in place to properly define facility conditions.
13. Observe a demonstration of the facilities ability to assess radiological hazards to personnel, the public, and environment, based on quantities released, materials, and meteorology using analysis results in the ISB and CSER.
14. Verify an ALARA program has been established and is being utilized.
15. Review documentation and tour the facility to ensure sources of radiation are properly controlled.
16. Ensure contamination control procedures are understood by interviewing field personnel, performing a facility tour and reviewing documentation.

Basis:

This review is based on functional requirements contained in State and Federal requirements.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section 4-27, Radiological Control Practices and Procedures
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.14, ALARA Program
Section 1.30, Conducting Self Survey at Solid Waste Disposal

8.8

Industrial hygiene and safety programs, policies, and procedures have been developed which are consistent with the hazards present or anticipated in the working environment as well as with DOE Orders and OSHA standards. The overall program is effectively managed to promptly address and remedy hazards, and systems are in place to communicate information to workers in order to prevent occupational injuries and illnesses.

Criteria:

1. A formal safety and health program has been developed which includes procedures and policies consistent with DOE Orders and OSHA.

2. Sufficient resources are available and dedicated to occupational safety and health to operate an effective program. Personnel, equipment, and reference materials are available to administer the program.
3. Appropriate record keeping procedures have been established to document injuries, illnesses, and accident occurrences and to permit the ready analysis of such records.
4. Training effectively performs required Industrial Hygiene and Safety training. The content of training programs adequately addresses all requirements and hazards at the facility, is effectively communicated, and records are maintained. (assessed under Core Requirements 2 and 3, provided here for information and completeness).
5. Sufficient work place surveillance exists to seek and track safety and health hazards. Regular and periodic audits are conducted to assess work place conditions.
6. Noncompliant conditions are documented, corrective action dates established, and tracking programs implemented to assure prompt abatement of observed hazards. Where engineering or administrative controls are not readily implemented, personal protective equipment is available and used to provide employee protection.
7. A system exists and is utilized whereby employees may identify safety and health hazards to their manager for corrective action without fear of reprisal. Employees are aware of their access rights to information including medical and monitoring records and Material Safety Data Sheets.
8. As a minimum Industrial Safety, Industrial Hygiene, and Nuclear Safety should have assessed the following respectively:

A - 1. Work area is safe, free of tripping hazards, clean, appropriate signs posted, barricaded as appropriate, floors dry and loading capacities posted; 2. Electrical equipment is properly grounded, Ground Fault Interrupters (GFI) provided where required, power control panels and breakers labeled, and electrical devices properly covered/protected; 3. Heat generating appliances/equipment are a safe distance from combustible material; 4. Machine guards in place, caution/warning signs posted, physical safety systems operational/functional and can not be inadvertently bypassed and safety devices (i.e. relief valves) provided; 5. Equipment/machines adequate/safe for job, special hand tools/handling devices for material handling provided; 6. Personal protective equipment/clothing provided; 7. A job hazard analysis (JHA) has been performed; 8. A Lock and Tag system is in place.

B - 1. Lavatories functional, potable water lines disinfected and tested, back flow prevention devices functional, and water pressure adequate; 2. Inside/outside facility lighting adequate; 3. HVAC adequate, humidity controls if needed functional; 4. Site enclosed, as appropriate, to prevent entrance/harborage of rodents/insects, special/unique facility cleaning requirements provided for, and proper waste containers provided; 5. Noise controlled; 6. Personnel exposure to chemical hazards controlled.

C - 1. USQ process; 2. Implementation of ISB requirements; 3. Implementation of Criticality Safety Requirements.

9. A system is in place and implemented to estimate quantities and assess the integrated impact of hazardous material releases on personnel and the public.
10. Ladders, guard rails, and fall protection equipment are well maintained and meet applicable standards.

Approach:

1. A review of all relevant aspects of the formal safety and health program will be undertaken to evaluate the content for accuracy, adequacy, and consistency with DOE Orders and OSHA.
2. Safety and health resources, such as staffing, equipment, and the availability of reference resources will be evaluated to determine whether knowledge and tools exist to operate and manage an effective program.
3. Review the frequency of scheduled safety inspections to assure it meets the needs of the facility's mission objective.
4. Review records to determine if they are properly maintained. This review will include injury and illness records and inspection records.
5. A physical walk through of selected areas of the facility will be performed to observe actual work site conditions and practices to assess compliance with existing requirements, and the effectiveness of internal audits. As a minimum the following will be assessed: 1) Work area is safe, free of tripping hazards, clean, appropriate signs posted, barricaded as appropriate, floors dry and loading capacities posted, 2) Electrical equipment is properly grounded, Ground Fault Interrupters (GFI) provided where required, power control panels and breakers labeled, and electrical devices properly covered/protected, 3) Heat generating appliances/equipment are a safe distance from combustible material, 4) Machine guards in place, caution/warning signs posted, physical safety systems operational/functional and can not be inadvertently by passed and safety devices (i.e. relief valves) provided, 5) Equipment/machines adequate/safe for job, special hand tools/handling devices for material handling provided, 6) Personal protective equipment/clothing provided, 7) A job hazard analysis (JHA) has been performed, 8) A Lock and Tag system is in place, 9) Lavatories functional, potable water lines disinfected and tested, back flow prevention devices functional, and water pressure adequate, 10) Inside/outside facility lighting adequate, 11) HVAC adequate, humidity controls if needed functional, 12) Site enclosed, as appropriate, to prevent entrance/harborage of rodents/insects, special/unique facility cleaning requirements provided for, and proper waste containers provided, 13) Noise controlled, 14) personnel exposure to chemicals, and, 15) Nuclear Safety issues (USQ process, ISB requirements, criticality issues).
6. Employee interviews will be conducted to determine the extent of their knowledge regarding worker rights, such as Employee Concern program and access to information.

7. Review procedures and observe equipment for sampling, monitoring, and analyzing hazardous substances to ensure that provisions are in place to collect data for notification and reporting as directed by Federal and state requirements.

Basis:

OSHA, and DOE Orders require that occupational safety and health programs ensure that employees are informed of potential hazards that may be encountered in the work place and that the associated controls are in place to maintain risks at an acceptable level. Effective procedures must be established and enforced to protect the employees' safety and health.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section 1-10, Safety Manual
Section 1-11, Industrial Hygiene (NEW)
Section 4-29, Nuclear Criticality Safety
Section 4-40, Industrial Hygiene (OLD)
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.15, Safety Analysis
Section 2.17, Criticality Safety

8.9

There is a security organization and program that adequately supports the requirements of operations.

Criteria:

1. The organizational structure is clearly defined and staffing and resources are sufficient to accomplish tasks assigned to the organizational elements. Responsibilities, authority, and interfaces for each organizational position are clearly defined and understood. Interfaces with other CWC organization is well defined and understood. (Assessed under Core Requirements 11 and 13, provided here for information and completeness)
2. Procedures and controls that assure safe and reliable operations are employed in the conduct of security activities.

Approach:

1. Review procedures which control the security program for adequacy and implementation.

Basis:

CWC has an important DOE mission as well as valuable physical and personnel resources. It is therefore important that these resources be protected by a competent and dedicated security organization. The ORR review is to establish that the general scope, personnel qualifications, and demonstrated competence of the Security organization is adequate to support operations.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section 2-3, Property Management
Section 4-7, Unclassified Computer Security
Section 4-33, Security Manual
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 3.7, Shift Routines

8.10

There exists an adequate configuration management program to assure necessary change and drawing control of plant structures, systems, and components and to assure changes are reflected in training, procedure development, maintenance instructions, and technical baseline.

Criteria:

1. Configuration Management procedures/policy exists and are clearly communicated and understood by all levels of the organization. Appropriate graded approach is utilized consistent with the safety class of process and utility equipment/systems.
2. Responsibilities and interfaces for configuration management are clearly defined. (Assessed under Core Requirement 11, provided here for information and completeness)
3. Documents, drawings, and other references which define the facility configuration are readily available, authorized, properly controlled and are used in designing plant changes, preparing facility procedures, troubleshooting, etc.
4. Management ensure that changes to the facility are warranted and properly controlled.
5. An administrative program is in place to ensure that modifications are analyzed, documented, approved by appropriate personnel and organizations, and reflected in design drawings, revised operations; training, and maintenance procedures.
6. The configuration of systems as contained on as-built drawings have been physically verified.
7. Procedures and management policies for changes to the facility are properly executed.
8. The design control program was properly implemented in the design of the facility.
9. 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 as described in the authorization basis.
10. Temporary modification are controlled to ensure facility configuration is maintained.

Approach:

1. Review the configuration management program to determine the adequacy of facility interfaces required to maintain configuration management, proposed change review and approval, configuration control drawings, vendor manual control.

2. Interview the responsible manager for configuration management to assess the backlog of design changes, backlog of drawing changes, backlog of facility modifications, prioritization scheme for facility changes, and the interface with maintenance, training, and operations personnel concerning impacts of new and revised design requirements.
3. Verify that Certified Vendor Information files are in place and are correctly referenced with the H-2 drawings.
4. Confirm a program is in place and has been implemented requiring the physical walk down of systems to verify the accuracy of applicable design drawings/documentation. Confirm the validation/verification process by performing a walk down to ensure systems are documented as built.
5. Verify that the change control process has been adequately implemented and that temporary and permanent changes are adequately controlled.
6. Review a major change to the facility/systems to establish that the change was properly analyzed (for functionality, safety, authorization basis, and possible interactions with other systems), documented, and reviewed, including, where necessary, reviews by independent organizations.

Basis:

These criteria ensure activities associated with plant configuration are appropriately controlled to maintain the facility configuration in conformance with design requirements. Conduct of operations require that drawings relied upon by operators and maintenance personnel must accurately reflect the plant configuration, and that the function, design basis, and current status of equipment and systems, required for safe operation, are known and documented, with up-to-date accurate records. These drawings must be prepared, approved, controlled, and used to ensure that the plant is operated safely and within all safety related limits.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
 - Section 3-5, Documentation Control and Records Management
 - Section 6-1, Standard Engineering Practices
 - Section 6-2, Project Management
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
 - Section 1.8, Training Administration
 - Section 1.24, Unreviewed Safety Questions
 - Section 2.1, Configuration Change Control
 - Section 2.2, Solid Waste and T Plant As-Built Drawing Control
 - Section 2.4, Configuration Management Section 2.11, Job Control System
 - Section 3.13, Control of Equipment and System Status
 - Section 3.22, Operating Procedures

8.11

An adequate records management/document control program exists to assure that all important documents, records, and related information are maintained current and readily retrievable.

Criteria:

1. The records management program defines responsibilities for determining what documents will be controlled in a system; methods used for acquisition, identification, storage, retention, and retrieval of documents; and controls to be exercised for changes, distribution, and removal.
2. The records management program scope includes receipt or preparation, review and approval, and distribution of documents generated externally and internally in a timely manner.
3. The records management program includes processes, interfaces and responsibilities for controlling design bases and technical documents, such as calculations, specifications, drawings, vendor manuals, records of maintenance, test results, etc.
4. Necessary documents are kept current and legible and are either available at appropriate plant locations or can be provided in a timely manner.
5. The document control program assures that uncontrolled drawings, manuals, and procedures are not used at the work location.
6. Documentation is stored correctly (e.g., fire proof cabinets for QA records).

Approach:

1. Review the program and procedures which define the records management system.
2. Review records management program and implementing procedures in engineering, maintenance, operations, and materials management to ensure responsibilities and processes are documented for controlling technical documentation. Sample the efficiency of the system by selecting one system important to safe operations and requesting documents associated with design, procurement, construction, maintenance, and operability of one or two significant pieces of equipment in that system. Interview selected facility management to assure they are knowledgeable of records management and retention policies and procedures.
3. Observe work in process involving structures, systems, and/or components, note any use of uncontrolled drawings, procedures, or manuals.

Basis:

An effective records management program is necessary to ensure that proper information is available for planning, decision-making, and performance

audits. Timeliness and availability of records, especially technical documentation, is important for ensuring the safety and health of workers and protection of the environment.

References:

1. WHC-IP-1120, Rev 4, Standards / Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section 3-4, Information Release Administration
Section 3-5, Document Control and Records Management
Section 3-6, Uniform Publication System
4. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.1, External Correspondence and Technical Work Document Approvals
Section 1.13, Processing and Transferring Records
Section 2.1, Configuration Change Control
Section 2.2, Solid Waste and T Plant As-Built Drawing Control
Section 2.4, Configuration Management
Section 2.11, Job Control System
Section 3.17, Logkeeping

8.12

There exists an occurrence reporting/root cause program.

Criteria:

1. An occurrence reporting program is established which ensures that sufficient personnel are trained in root cause analysis techniques and are available.
2. The program shall ensure that those conducting investigations are independent of the cause of the unusual event.
3. The "lessons learned" which are developed as a result of the program implementation and root cause analysis shall be incorporated into the corrective action system to prevent recurrence.
4. The program should contain provisions to call in personnel with special expertise to assist in the occurrence investigation.

Approach:

1. The program will be reviewed in order to determine if the programmatic aspects ensure that knowledgeable and independent (if applicable) personnel conduct investigations.
2. Review completed assessments (if available) and verify that personnel performing the assessments were independent of the area assessed.
4. Review completed assessments (if available) to determine the specific findings and/or recommendations generated as a result of the assessment. Verify the incident and lessons learned have been incorporated into the training and re-training programs. Verify that the root causes have been determined, and corrective actions have been discussed with the appropriate plant staff.
5. Ensure assessment teams be supplemented with special expertise (if required) to assist in the occurrence investigation. Through discussion with cognizant personnel, identify and review an assessment (if available) where outside special expertise was required.

Basis:

An assessment program which specifies the skills, knowledge, and abilities required to perform occurrence investigations and ensures that corrective actions are implemented to prevent recurrence is essential to verifying the adequacy of activities.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration

Core Requirement 9

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

Interpretation:

The adequacy of the Emergency Plan and Emergency Preparedness Organization is to be assessed under Core Requirement 8. This Core Requirement does not require a review of the Emergency Plan except to ensure that an adequate cross section of emergency situations are addressed by the drill program.

Criteria:

1. The drill program adequately plans, schedules, prepares, conducts, critiques, and documents drills.

Approach:

1. Compare the Emergency Plan to the drill program to assess the adequacy and applicability of drills to the facility.
2. Observe and assess a drill.
3. Review and assess the results of the drill(s) and assess the resolution of deficiencies.
4. Review records of routine and emergency drills for adequacy and completeness.
5. Personnel are apprised of the results of the drill critiques and are included in the lessons learned program.

Basis:

An effective emergency preparedness, and response program is necessary to help ensure the safety and health of workers, the public, property and environment in the event of an emergency. Emergency management programs should be in place to enable organizations to respond to an emergency in a timely, efficient, and effective manner, resulting in mitigation of consequences and recovery. A drill program is required to periodically test the program to ensure proper functionality.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration
4. DOE - 0223, Emergency Plan Implementing Procedure
5. HNF-PR-000424, Maintaining Facility Emergency Preparedness

Core Requirement 11

Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management responsible for control of safety.

Interpretation:

This applies to all facility and direct support personnel/groups (Environmental Compliance, Fire Protection, Maintenance, QA, Health Physics, Training, Industrial Hygienist, Industrial Safety, Nuclear Safety, Laboratories, Security, Records Management, and Occurrence Reporting, Emergency Preparedness, etc.). The review is to ensure that management has developed adequate position descriptions, job definitions, and reporting relationships and has adequately informed and trained all facility personnel on them.

Criteria:

1. Policies/procedures exist defining the responsibility, authority, accountability, and reporting relationships of each management position, exempt position, non-exempt position, bargaining unit, and direct support personnel (e.g., Environmental Compliance, Fire Protection, Engineering, Maintenance, QA, Health Physics, Training, Industrial Hygienist, Industrial Safety, Nuclear Safety, Laboratories, Security, Records Management, Projects, Occurrence Reporting, Emergency Preparedness, etc.).
2. All personnel associated with the facility understand and implement their responsibilities, authority, accountability and reporting relationships.
3. Department interface and bounds are clearly defined and understood.
4. Support group interface and bounds are clearly defined and understood.
5. Oversight interface and bounds are clearly defined and understood.
6. Managers have appropriate access to DOE, regulators, and emergency organizations on matters of safety and environmental protection.
7. Line organizations are unencumbered by excessive duties or significant duties unrelated to the day-to-day operation.
8. Managers encourage and effectively foster teamwork and cooperation among interfacing organizations.
9. Directives and other management information flow quickly and accurately through the management chain and other formal channels of communication.
10. An adequate program exists for dissemination of general information to employees regarding the facility.
11. Position descriptions are available.

12. Subcontractors understand their reporting relationships and responsibilities. Subcontractor interface and bounds are defined and understood.

Approach:

1. Obtain organization charts, position descriptions, and procedures to establish that there exists, for individuals and departments, clear definitions and bounds of authority, accountability, responsibilities, and reporting relationships.
2. Interview facility personnel to determine the adequacy of collateral duties, contractor/subcontractor interfaces and accountability, delegation practices, management attitude and practices which foster or hinder cooperation and teamwork, effectiveness of information flow (timeliness, adequacy, emphasis on safety and environmental protection).
3. Interview managers to ensure there exists adequate access to DOE, regulators, and emergency organizations on matters of safety and environmental protection.

Basis:

Management is responsible for the organization and coordination of work in order that responsibilities, authorities, and accountability are clearly understood and that responsibility for safety is prevalent throughout the organization. Documentation of the organization and coordination of the work combined with implementation of the documented policies and procedures are equally important. A basic responsibility of management is to ensure that effective coordination and communication exists between and within various levels of the organization.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section CM-1, Policies and Charters

Core Requirement 12

The implementation status for DOE Order 5480.19, Conduct of Operations requirements for DOE facilities, is adequate for operations.

Interpretation:

This Core Requirement is to ensure the facility is complying with all Conduct of Operations requirements as written in WHC-CM-5-34 .

Criteria:

1. The facility has implemented the WHC-CM-5-34 Conduct of Operations chapters specifically the following:
 - 3.6, Operations Maintenance (assessed under Core Requirement 8)
 - 3.7, Shift Routine and Operating Practices
 - 3.9, Communication,
 - 3.10, On The Job Training (assessed under Core Requirement 2 and 3)
 - 3.13, Control of Equipment and System Status
 - 3.14, Lockout and Tagout
 - 3.15, Independent Verification
 - 3.16, Alarm Management
 - 3.17, Logkeeping
 - 3.18, Operations Turnover
 - 3.19, Chemistry and Unique Processes
 - 3.20, Required Reading
 - 3.31, Timely Orders to Operators
 - 3.22, Operation Procedures
 - 3.23, Operator Aid Posting
 - 3.24, Equipment and Piping Labeling

Approach:

1. Review and assess the facility's implementation of each applicable chapter in WHC-CM-5-34, Section 3.0, *Operations*.

Basis:

The organization and administration of facility Operations should ensure a high level of performance in Operations is achieved through effective implementation and control of Operations activities. Clear lines of responsibility for normal, alarm, and emergency conditions should be established. Effective implementation and control of operating activities may be achieved by establishing written standards for Operations, periodically monitoring and assessing performance, and holding personnel accountable for their performance. Good operating discipline ensures facility and process configuration is maintained in accordance with design requirements, and that the operating staff knows the status of facility and process equipment and systems at all times.

References:

1. WHC-CM-5-34, Solid Waste Disposal Operations Administration

Core Requirement 13

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

Interpretation:

This Core Requirement is only to ensure adequate numbers of qualified personnel. Assessment of qualification is addressed under Core Requirements 2 and 3.

Criteria:

1. There is an adequate number of qualified personnel for the mission of the facility.
2. The staffing requirements are adequate to ensure safe operations.

Approach:

1. Using qualification records and job assignment records, compare the numbers of qualified personnel to the staffing levels identified by facility management to ensure Criterion 13.1 is met.
2. Verify the staffing levels are greater than or equal to any minimum staffing requirements identified in the authorization basis.
3. Review and assess staffing requirements identified by the authorization basis and line management by witnessing the performance or walking down plant operating procedure and work plans to verify that adequate numbers of personnel are available to operate the systems.

Basis:

Adequate numbers of qualified personnel are required to ensure the facility can be operated safely, efficiently, and compliantly. Inadequate staffing puts undue stress on plant personnel, creates unsafe work practices, corner cutting, inattention to detail, poor work atmosphere, excessive backlog, and endangers the environment.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
Section 1-3, Management Requirements and Procedures
4. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.8, Training Administration

Core Requirement 15

The facility systems and procedures as affected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis.

Interpretation:

This core requirement applies to having programs and/or processes in place to assure equipment, systems, facilities, and organizations are prepared for processing following major modifications. It includes all aspects required for the successful restart/start of operations and assure that the approved safety basis performance requirements are satisfied and institutionalized appropriately for a category 2 facility.

Criteria:

1. Operations, maintenance, surveillance, and administrative procedures have been adequately updated to reflect the facility modifications and meet or exceed the operational performance guidance provided in DOE order 5480.19.
2. Operations, maintenance, surveillance, and administrative procedures implement the changes made in the approved safety basis resulting from the facility modifications.
3. An adequate process has been implemented to ensure that documentation for systems critical to and support the safety of the facility exist, reflect the current facility modifications, and are kept current.
4. Drawings and other documentation relied upon for operations and maintenance activities are consistent with the new existing plant configuration.
5. An equipment/system startup program is in place and adequately addresses operations testing to confirm operability of equipment, the viability of procedures, and the training of operators.
6. Construction vendors have completed all work and appropriate turnover documentation has been supplied to the operating organization. These need to include the construction checklist and open items punchlists.
7. Utility and support systems are operable, fully functional, and meet the performance requirements of the approved safety basis.
8. A USQ screening relative to the planned modification was completed prior to initiation of design and was appropriately dispositioned.
9. The Functional design criteria for modifications was utilized by the construction vendors for design, fabrication, and installation.

Approach:

1. Review validation, walkdown, and review comments for recent procedure changes that incorporate the needs of operating and managing the CWC 2404

phase V facility and have correctly included the requirements of the safety basis.

2. Interview operations staff to assess their understanding of the operational requirements for the 2404 facility and how the Administrative Operational Safety Requirements are met.
3. Interview technical support staff to assess their knowledge of both the operational and administrative procedure change process that implemented the additional requirements of the 2404 facility.
4. Review with technical support personnel that vendor drawings, specifications, and operational characteristic data have been properly incorporated and user staff notified.
5. Review with technical support personnel responsible for modifications that vendor turnover open items have been properly dispositioned and a formal process to verify construction activities met functional design criteria was utilized.
6. Review the listing of safety support systems to ensure consistency with the safety basis. This includes defined organizational roles, responsibilities, and interfaces required to meet the AOSRs.
7. Interview personnel associated with configuration management and record storage to assess their understanding of program requirements and responsibilities.

Basis:

To determine if procedures, systems, equipment, and personnel have been integrated to allow safe, efficient, and compliant operation after the facility modification.

Requirements

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document
2. WHC-CM-5-36, Solid Waste Disposal Internal Requirements
3. WHC-CM-5-34, Solid Waste Disposal Operations Administration

Core Requirement 19

The technical and management qualifications of contractor personnel, responsible for facility operations, are adequate.

Interpretation:

This Core Requirement applies to all management associated with the facility. All other personnel are assessed under Core Requirements 2 and 3.

Criteria:

1. Management has adequate on-the-job experience and/or training/education that qualifies them for their positions.
2. Adequate documentation of management qualifications is available.
3. Examinations, given to management personnel, are adequate in their depth and breadth of subject matter as it pertains to facility operations.

Approach:

1. Review test material to verify that they adequately reflect training content and test for an understanding of technical fundamentals, procedures, ACs, TSRs, plant activities, and responsibilities associated with emergency response.
2. Review and assess management qualification requirements for adequacy.
3. Review and assess completion of qualifications and test results for management personnel.
4. Conduct interviews to determine the extent of knowledge of technical fundamentals, procedures, ACs, plant activities, and responsibilities associated with emergency response.

Basis:

The DNFSB Recommendation 92-6 delineated some of the important facets of a readiness review. These included assessment of the technical and managerial qualifications of contractor personnel responsible for direction, guidance, and operation of the facility.

References:

1. WHC-IP-1120, Rev 4, Standards/Requirements Identification Document (SRIDS)
2. WHC-CM-5-34, Solid Waste Disposal Operations Administration
Section 1.8, Training Administration
Section 3.10, On-the-Job Training

APPENDIX C: ORR FORMS

PHASE V STORAGE ORR IMPLEMENTATION PLAN

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Appendix C: ORR Forms

PHASE V STORAGE ORR APPRAISAL FORM

CORE REQUIREMENT:

APPROACH:

CRITERIA:

SUBJECT/ACTIVITY REQUIREMENT REFERENCE	EVIDENCE EXAMINED/ PERSONNEL CONTACTED	OBSERVATIONS/COMMENTS	COMPLY	
			YES	NO
1)				
2)				
3)				
4)				
5)				

Appendix C: ORR Forms

ORR FINDING FORM

FINDING NUMBER: F. (example F.1.1.1, refers to Core Requirement 1, Criteria 1, Finding 1, F.1.1.2 would refer to Core Requirement 1, Criteria 1, Finding 2, etc.)

CORE REQUIREMENT NUMBER: **CORE REQUIREMENT STATEMENT:**

CRITERIA NUMBER: **CRITERIA STATEMENT:**

DATE:

FINDING STATEMENT:

WRITING INSTRUCTIONS

Provide a concise statements of the finding. It is not to list actions that must be done to correct findings. It is not to be a general statement of whether or not readiness has been achieved (this will be a general board statement in the report). Hard and electronic copies of forms will be provided to RT members. Format provided here for information.

DISCUSSION/CONCLUSION:

RECOMMENDATION:

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

TEAM LEADER:

Appendix C: ORR Forms

ORR OBSERVATION FORM

OBSERVATION NUMBER: 0. (example 0.1.1.1, refers to Core Requirement 1, Criteria 1, Observation 1, 0.1.1.2, refers to Core Requirement 1, Criteria 1, Observation 2)

CORE REQUIREMENT NUMBER: **CORE REQUIREMENT STATEMENT:**

CRITERIA NUMBER: **CRITERIA STATEMENT:**

DATE:

OBSERVATION STATEMENT:

WRITING INSTRUCTIONS

Provide a concise statement as to the Observation. Since an Observation is not a Finding: less time, energy and resources should be spent developing. Hard and electronic copies of forms will be provided to RT members. Format provided here for information.

DISCUSSION/CONCLUSION:

RECOMMENDATION:

RESOLUTION:

SIGNATURES:

TEAM MEMBER:

TEAM LEADER:

APPENDIX D: FINDING CLASSIFICATION CRITERIA

APPENDIX D: FINDING CLASSIFICATION CRITERIA

These criteria will be used by the team to determine if a finding must be resolved before startup.

A. Initial Screening

1. Does this finding involve a system that provides personnel safety and/or protects the environment?
2. Does this finding involve processes, functions or components identified in the technical safety requirements/operational safety requirements (TSR/OSR) or nuclear safety control procedures?
3. Does this finding involve potential adverse environmental impact exceeding regulatory or site-specific release limits?
4. Does this finding impact non-safety processes, functions or components which could adversely impact safety related processes, functions or components?
5. Is this finding noncompliant with a RFSH or DOE/RL approved requirements document?
6. Does this finding indicate a lack of adequate procedures or administrative systems?
7. Does this finding indicate operational or administrative noncompliance with procedures or policy?
8. Has this finding occurred with a frequency that indicates past corrective actions have been lacking or ineffective?
9. Does this finding require operator training not specified in existing facility training requirements?
10. Does this finding impact worker health and safety?
11. Does this finding impact the performance of the facility mission?

If the response to any of the above is yes, further evaluation, in accordance with the finding impact criteria is required. If the response to all of the above is no, the finding is considered to be poststart.

B. Finding Impact Criteria

1. Does the loss of operability of the item prevent safe shutdown, or cause the loss of essential monitoring?
2. Does the loss of operability of the item require operator action in less than 10 minutes to prevent or mitigate the consequences of events described in the safety analysis?
3. Does the loss of operability of the item cause operation outside the TSR/OSRs or safety analysis?
4. Does the loss of operability of the item result in a reduction of the margin of safety?
5. Does the finding indicate a lack of control which can have a near-term impact on the operability or functionality of safety related system?
6. Does the finding result in an unacceptable impact on worker health or safety?
7. Does the finding prevent the facility from performing its mission?

If the response to any of the above questions is yes, the finding is considered to be prestart. If the response to all of the above questions is no, the finding is considered to be poststart. However, some poststart findings may be changed to prestart by the team leader due to potential health, safety, and/or environmental significance.

APPENDIX E: OPERATIONAL READINESS REVIEW REPORT FORMAT

1. TITLE PAGE - The title page is the report cover and will state the subject and dates of the ORR.
2. SIGNATURE PAGE - This page will contain the signatures of the Team Leader and all team members.
3. TABLE OF CONTENTS - The Table of Contents will identify all sections and subsections of the report, and appendices.
4. EXECUTIVE SUMMARY - This is a brief summary of the ORR process, the Findings and the conclusions as to the readiness of the facility to commence operations, with the appropriate recommendation.
5. INTRODUCTION - The introduction will provide information regarding the facility, the purpose of the ORR, and the scope of the ORR. It should also contain a brief discussion of the ORR process and team composition.
6. Team Evaluation - The report will present the review logic of appraising each core requirement and determining the associated prestart and poststart findings. The report will also provide conclusions as to readiness of the facility to commence operations and the recommendation of the team leader. The appraisal forms provided in the appendices will be referenced to provide the review logic for each finding.
7. CONCLUSIONS and CATEGORIZATIONS - The report will provide a summary of findings and observations as they relate to facility operational capabilities, training quality safety, management, compliance, etc.
8. LESSONS LEARNED - Lessons learned that may apply to future ORRs will be provided. Problems as well as successes will be documented. This may be issued at a later date as an addendum to the ORR report.
9. APPENDICES - Appropriate data will be provided as appendices to support the conclusions drawn in the report. These will include:
 - a) Master finding list
 - b) ORR finding forms
 - c) Master observations list
 - d) ORR observation list
 - e) ORR appraisal forms
 - f) ORRIP
 - g) Completed prerequisite checklist
 - h) RT member qualifications
 - i) Dissenting opinions