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As-Built Verification Plan for Cask Transportation Facility Modifications (CTFM) — Project A.5/A.6

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

Fluor Hanford
P.O. Box 1000
Richland, Washington

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FOREWORD

This As-built Verification Plan (AVP) establishes a uniform and systematic process to ensure essential technical information shown on engineering drawings accurately depicts the physical configuration of the project work installed in 105 K West (KW) Basin and that essential components are accurately indexed in the KW component index data base. This document defines and implements processes to be performed for selected drawings and indexed components for structures, systems, and components, (SSCs), required to support the successful completion of project turnover. The information obtained from the field verification process reflects the actual physical configuration and identifies any discrepancies discovered between the field condition and approved drawings and components in the component index.

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Key Words: Cask Loadout System (CLS), Cask Transportation Facility Modifications (CTFM), As-Built, Multiple Canister Overpack (MCO) Loading System (MLS).

Abstract: This document establishes an As-built Verification Plan (AVP) for implementing requirements in PHMC Engineering Requirements HNF-PRO-1819, Rev. 4, Sections 2.8.3.d and 2.10.8 and Spent Nuclear Fuels (SNF) Project Administrative Procedure EN-6-012-01. This AVP defines and implements approved processes to document the physical configuration of the project scope installed within the facility and identify discrepancies between the associated project engineering drawings and the field configuration, and the component index (CI) database as defined in AP EN 6-005-02. This AVP defines requirements for project activities verifying conformance of structures, systems, and components (SSCs) to project specified requirements.

1.0 PURPOSE

This document establishes an As-built Verification Plan (AVP) for implementing requirements in PHMC Engineering Requirements HNF-PRO-1819, Rev. 4, Sections 2.8.3.d and 2.10.8 and Spent Nuclear Fuels (SNF) Project Administrative Procedure EN-6-012-01. This AVP defines and implements approved processes to document the physical configuration of the project scope installed within the facility and identify discrepancies between the associated project engineering drawings and the field configuration, and the component index (CI) database as defined in AP EN 6-005-02. This AVP defines requirements for project activities verifying conformance of structures, systems, and components (SSCs) to project specified requirements.

2.0 SCOPE

The scope of this AVP is limited to SNF Project Subproject Cask Transportation Facility Modification (CTFM) A.5/A.6. The scope of project work to be as-built verified by the processes identified in this AVP is defined by the Cask Loadout System (CLS), Design Authority (DA) with concurrence from facility and other subproject DA's responsible for SSCs that interface with CLS SSCs. The SSCs, engineering drawings, and boundary descriptions to be as-built are identified in Appendix A. Only one as-built verification effort is required for the scope identified within this document. Verification shall be made after completion of construction; thus no mandatory hold points are required.

Engineering drawings designated as essential drawings by the CLS DA shall be completely field verified. Engineering drawings designated as support drawings by the CLS DA shall be partially or completely field verified as identified in Appendix A. Engineering drawings designated as general drawings may be partially or completely field verified as identified in Appendix A. All as-built stamped engineering drawings provided by vendors shall have all work completed Engineering Change Notices (ECNs) incorporated and be field verified per HNF-PRO 1819 Rev 4, Section 2.8.3.d.

This AVP requires that ECNs designated as modification work are signed off as work complete and a copy of the signed sheet of that ECN has been delivered to a Hanford Site Document Control (HSDC) release station. ECNs generated against existing facility drawings and designated as modification work shall be as-built verified by administrative procedures identified in the engineering change control process, work control process and the configuration management plan and are not included in the scope of this AVP.

Verification of vendor supplied drawings marked as "as-built" drawings and approved by the project DA do not require further as-built field verification and therefore are not included in the scope of this plan.

This AVP enumerates the following:

- The scope of the project that requires As-Built Verification.
- Approved methods for verifying as-built condition of required project scope.
- Participant positions and their respective task responsibilities.
- Approved processes to identify, resolve and document discrepancies between as-built configuration and project design drawings and between the K West (KW) component index and project design drawings.

3.0 DEFINITIONS

As-built drawing – an engineering drawing depicting the actual physical configuration as confirmed by field walkdown.

As-built field verification – approved processes entailing field inspections that ensures the documentation of the physical installation of SSCs is accurately indicated on engineering drawings.

As-built verification – approved processes ensuring engineering drawings of SSCs accurately indicate the physical configuration of the facility.

Check print – a copy of a drawing used for comparison or verification.

Cognizant engineer – the person appointed by the SNF Project chief engineer to maintain cognizance of installed facility and process systems. Cognizant engineers provide technical guidance to the maintenance and operations organizations for operating facility processes, procedures, and activities.

Component index (CI) – an index of all components vital to the operation and maintenance of the K Basins facility. It lists the components by tag number, type of component, manufacture, physical location, and rating, etc.

Component test procedure (CTP) – a procedure used by the Startup Engineering to qualify the installation. A procedure used by Startup Engineering to ensure acceptability of completed construction scope prior to turnover to Operations.

Covered item – part of SSCs that will be hidden from view or inaccessible for visual inspection due to subsequent work.

Design authority – the person appointed by the SNF Project chief engineer to be uniquely responsible and accountable for final acceptability of a SSC and its design baseline.

Discrepancy – a difference between the physical configuration observed in the field and what is shown on the drawing.

Discrepancy data sheet (DDS) – data sheet used to document discrepancies between the project drawing or CI items and SSCs in the field. A copy of this DDS is included in this FVP as Appendix B.

Drawing category – the three drawing categories assigned to project drawings are essential (E), support (S), and general (G). Priority in field verification is given first to (E) followed by (S) drawings.

Field drawings – a set of the drawings marked up to reflect as-constructed condition and used by the field walkdown verifier during the walkdown phase of the data collection process.

Field verification – the process of identifying the updated engineering drawings and all associated changes, performing a field walkdown, documenting the as-found condition, and reconciling any differences. This process may also include the testing of systems and components to ensure compliance with functional requirements.

Field verification package index – data sheet listing documents used to field verify a project drawing or component with actual field configuration.

Independent checking – a review of the field verified drawings conducted by individuals who have not participated in the walkdown of the SSC.

Non-compliance report (NCR) – a report that may be used during Quality Assurance/Quality Control (QA/QC) audits of field verified drawings, to document a discrepancy with the verified drawing.

Surveillance report – a report that may be used during QA/QC audits of field verified drawings, to document a discrepancy with the verified drawing.

Verification package – a project record that documents the elements of the walkdown/field verification process.

Walkdown (field verification walkdown) – a visual inspection of SSCs to identify the as-found physical configuration and any discrepancies with currently approved facility documentation. The field walkdown may include verification "ringing-out" of electrical circuits (P&IDs, electrical one lines) as specified by the project cognizant engineer and facility cognizant engineer.

Walkdown team lead – the person designated by the design authority or cognizant engineer to witness and document the execution of a field verification plan. For this plan the walkdown team lead shall be the PLE unless otherwise designated by the DA.

4.0 RESPONSIBILITIES

4.1 FLOUR HANFORD, INC.

4.1.1 Project Manager

- Approve and implement this as-built field verification plan.
- Provide Preventative Maintenance (PM) support for the as-built verification process, including approving the schedule, staffing, and funding for the as-built verification process.
- Verify DDSs are controlled.
- Ensure the verification packages are transmitted to Technical Document Control and LMSI maintained Project Files.

4.1.2 Project Design Authority (DA)

- Approve this Field Verification Plan.
- Approve the dispositions to discrepancies generated by the as-built verification processes, including those identified by QA random checks.
- Verify relevant ECNs have been incorporated into the appropriate verification package prior to as-built field verification walkdowns.
- Approve resolution of discrepancies, and obtain appropriate concurrence as necessary from the K Basin facility and systems DAs or cognizant engineers.
- Approve the completed as-built field verified print.
- Approve for release the as-built project drawings.
- Identify for field verification, the critical characteristics and requirements for indexed components.
- Identify and approve the method(s) by which identified SSCs are field verified.

4.1.3 Project Lead Engineer (PLE)

- Maintain a discrepancy logbook
- Maintain the completed DDSs.
- Verify the field verified drawings and the disposition of discrepancies.
- Prepare the as-built field verification packages.

- Resolve discrepancies identified by the as-built field verification process.

4.1.4 Quality Assurance

- Approve this plan (ensure this AVP is adequately comprehensive and procedurally compliant).
- Provide oversight surveillance of the AVP process.
- Report unsatisfactory findings in writing to the DA. This may be done using a NCR or surveillance report.

4.1.5 Facility Engineering Manager

Approve this AVP, including concurrence with the identified scope and respective method for as-built field verification.

4.1.6 Project Engineering Manager

- Ensure that all walkdown team members are qualified and trained to perform walkdown functions and, if necessary, impose additional training and/or requiring proficiency demonstration prior to allowing individuals to perform as-built field verification walkdowns.

4.1.7 Facility Cognizant Engineer (CE)/Design Authority (FDA)

- Approve this AVP.
- Obtain the concurrence of the K Basin system cognizant engineers in identifying the systems to be verified and the methods employed for each system verification.

4.1.8 Walkdown Team Leader

- Prepare field verification packages for each drawing and select CI requiring as-built field verification.
- Verify with Hanford Site Document Control that all existing ECNs are incorporated for each verification package prior to field verification activities. This action also includes incorporation of all drawing markups.
- Disposition discrepancies found by the walkdown team per DA direction.
- Provide information to the DA/PE for ECNs of the field verification changes.
- Schedule and coordinate personnel required to open specific panels, cabinets, motor control centers, etc., to support visual observation for as-built field verification activities.

- Ensure completed verification packages are assembled and submitted to the DA for approval.

4.1.9 Walkdown Team Members

- Perform field verification according to AVPs provided by the PLE.
- Provide input to the walkdown team leader for discrepancies encountered between the field and the design drawings/CI.
- Inform the PLE when he/she feels that they do not have the qualifications/knowledge necessary to perform the field verification activities they have been assigned.
- Verify that for all accessible SSCs specified on the drawing match the field configuration.

5.0 FIELD VERIFICATION PROCESS

The project DA, with concurrence from facility DA(s) as appropriate, shall determine which technical information requires as-built field verification based on operational requirements to meet the facility mission. The DA indicates as-built field verification boundaries for SSCs on all drawings requiring as-built field verification. This may encompass the entire drawing or any portion thereof. The DA also indicates the type of information and which of the CI items require labeling verification.

5.1 FIELD VERIFICATION METHODS

Acceptable methods of as-built verification to document the configuration of critical technical information on SSCs have been defined and are listed below. At the discretion of the project DA, non-critical information shall not require as-built verification. For critical information, previous activities and their documentation verifying as-built configuration, (FATs, CATs, PATs, CTPs, construction work packages, and vendor as-built drawings), may be acceptable and shall be used whenever possible. When the DA rules that previous efforts are not acceptable, as-built field verification shall be by Method 2 described below.

- Method 1 – This includes: 1) Project scope that the DA identifies as not requiring as-built field verification, 2) Facility modifications where confirmation of ECN work completion is documented by the ECN process for scope identified as modification work, 3) For vendor supplied drawings where previous vendor as-built efforts are acceptable to the DA.
- Method 2 - Perform as-built verification walkdown of identified structures, systems, and components to verify critical characteristics. For scope verified by method 2, the DA shall identify critical characteristics on drawings and boundaries for as-built field verification scope as indicated in Appendix A.

5.2 PRE-WALKDOWN ACTIVITIES

Prior to as-built verification, facility drawings used by the project and all project drawings shall be assigned an essential (E), support (S), or general (G) category. The method of as-built verification for a particular scope shall be identified prior to walkdown. ECNs generated against LMSI controlled project drawings listed in Appendix 1 shall be verified as complete prior to initiating the field verification walkdown

5.3 VERIFICATION PACKAGES

5.3.1 Project Drawing Verification Packages

The PLE will ensure the as-built field verification packages are ready for field verification. Unless otherwise specified by the DA, the package shall include a field verification package index, drawings and a copy of outstanding ECNs. Any reference drawings used to aid this process shall be examined for outstanding ECNs.

5.4 VERIFICATION WALKDOWNS

Only individuals qualified and trained to the requirements of AP EN 6-012 shall participate in the walkdowns. A comparison will be made between the physical configuration and the drawing configuration.

5.4.1 Visually Tracing the System

Within the scope designated by the DA and delineated in Appendix A, applying ALARA principles, each system component shall be visually verified to the fullest extent practicable. The verification team will perform a systematic walkdown of the system. Within the scope of the verification package, the walkdown team will clearly indicate on the drawing: 1) areas that are not able to be verified due to restricted access or other reasons, 2) discrepancies between the drawings and the facility configuration, including equipment that has been abandoned or is not in service.

5.4.2 Discrepancies

If discrepancies between the drawings and the facility are identified, the walkdown team lead shall show the actual configuration on drawings in the as-built field verification package, ensure that all members of the verification walkdown team concur, then indicate so by signing and dating the correction. The signatures attest to the fact that the individual(s) visually observed and indicated concurrence that the marked-up drawing accurately depicts the existing plant configuration for the parts of the drawing, not noted as inaccessible, contained within the boundaries being verified.

Reference drawings may be used to assist walkdown personnel in the location of components within the boundaries of the walkdown. These reference drawings may provide information that shows layout, elevation, or alternate system perspectives. The information on the marked-up field copy of the drawing may be transcribed onto a consolidated drawing for improved clarification.

5.4.3 Documenting Discrepancies

- Noted discrepancies are reported on the project DDS. The DDS shall be maintained by the PLE. The drawing number and zone location are included in the DDS entry to identify the location of each discrepancy on the marked-up drawing. The marked up drawing shall reference the discrepancy logbook entry number. The DDS shall also report discrepancies with the CI database. Each discrepancy shall be dispositioned by the PLE and approved by the DA.
- For components that are not labeled in the field, the walkdown member notes the condition on the DDS entry. No attempt will be made to inspect internal sub-components except as requested by the DA or the facility CE. During the walkdowns, general condition of facility SSCs and housekeeping should also be observed and any damaged components or irregularities should be reported in the variance logbook.

5.4.4 Justifying the Documented Difference

The PLE shall assist the DA in justifying the difference(s) between the drawing and the field configuration (e.g., ECNs). If the documents cannot be found justifying the difference(s), the DA shall determine the following:

Is the configuration **required for safe operation** of the system?

If NO, proceed to dispositioning the discrepancies per DA direction.

If YES, the DA will determine if the configuration is **safe to operate**. If determined **not safe to operate**, then take immediate remedial action. If the configuration is **safe to operate**, then disposition the discrepancy by completing the DDS.

Is the discrepancy disposition **accept-as-is**?

If YES, the PLE shall assist the DA to prepare an ECN to reconcile the discrepancy between the physical configuration and the drawing. The DA/PLE will process the ECN per existing SNF procedures and practices. The DA/PLE will obtain approval for the ECN as work-complete and incorporate the ECN on the field verified drawing for drawings in the LMSI system.

Upon completion, this work shall be documented on the DDS.

If NO (i.e., the disposition is other than accept-as-is), determine the following:

Should the hardware (physical configuration) be **restored to the drawing requirements**?

If YES, the DA/PE shall ensure the configuration is altered to match the drawing, and will document this on the DDS. An ECN is not required since the drawing is the governing document.

If NO, the DA/PLE shall prepare an ECN to describe the required changes. Upon completion, this work shall be documented on the DDS.

5.5 REVIEWING THE MARK-UP DRAWING

The walkdown team leader reviews the discrepancies listed in the DDS and on the marked-up drawing, and obtains disposition for discrepancies from the DA/PE. For those discrepancies involving areas that are inaccessible, determine if further verification is required:

If YES, Design Services documents the disposition.

If NO, the DA and the project engineers may provide as-built verification through **alternate means** (e.g., by surveillance, loop calibration, functional test, etc.).

5.5.1 Checking the Drawing

A check print will be developed after all walkdown information is incorporated on the drawing. This check print is used by an independent checker to ensure that the original walkdown and drawing incorporation are correct. This approved check print will be added to the verification package.

5.6 DRAWING REVISION/RELEASE

5.6.1 ECN Incorporation Prior to AVP Activities

This activity applies only to LMSI controlled drawings generated by the CTFM Project as directed by the DA. ECNs will be prepared as outlined in SNF AP EN-6-039.

Each drawing will specify the following in the drawing revision block:

"UPDATED PER FIELD VERIFICATION ECN XXXXXX
AS-BUILT FOR PROJECT K WEST CTFM
INCORPORATED ECNs, XXXXXX, XXXXXX"

or

"UPDATED PER PARTIAL FIELD VERIFICATION ECN XXXXXX
FOR PROJECT K WEST CTFM
INCORPORATED ECNs, XXXXXX, XXXXXX"

or

"K WEST CTFM PROJECT TURNOVER PER ECN XXXXXX"

or

"K WEST CTFM PROJECT TURNOVER AS-BUILT BY VENDOR
SEE VENDOR INFORMATION FILES XXXXX,
INCORPORATED ECNs XXXXXX, XXXXXX"

The following block will be added outside the border in the upper right hand corner:

"FOR FIELD VERIFICATION STATUS SEE REV. X"

5.6.2 Direct Revision ECN

This activity applies only to LMSI controlled drawings generated by the CTFM Project. A direct revision ECN may be written to document the completion of As-Building and Field Verification, if required by the DA. The ECN will include the following:

- This direct revision updates drawing H-1-XXXXX Sheet X Revision X per (this document #), Revision X, Field Verification Plan for K WEST CTFM Project

5.7 CLOSING OUT THE VERIFICATION PACKAGE

5.7.1 Assembling the Package Document

The verification package shall be retained by the SNF Project Files as a quality record and upon completion of this program shall be transmitted by the SNF Project Files to the Records Holding Area as a lifetime quality record in accordance with RIDS. The verification package may include:

- Copy of the DDS entry
- Original check print(s) (signed)
- Annotated draft CAD drawing(s) (signed) if drawing chosen for random check
- Marked-up drawing(s)
- AS-FOUND drawing
- Correspondence associated with drawing verification
- Revised/issued drawing

6.0 FACILITY DRAWING UPDATE PROCESS

6.1 PROCESS FOR UPDATE AFFECTED FACILITY DRAWING

To assure configuration control, the project drawing needs to be integrated into the existing facility drawing. The facility CE for each affected system will specify which drawings are impacted by the project and identify how to accomplish this task.

6.2 FUNDING/FINANCIAL OBLIGATION

The funding for project as-built/field verification drawings will be provided by the SNF Project, CTFM Subproject. The Project will have the financial responsibility for the as-built/field verification of all project drawings through turnover. After turnover, K Basin Operations will have the responsibility of keeping drawings current.

7.0 REFERENCES

HNF-PRO-1819, "PHMC Engineering Requirement"

SNF AP EN-6-012-01 "As-Built Verification Process"

SNF AP EN-6-039-00 "Engineering Document Change Control Requirements"

APPENDIX A

AS-BUILT VERIFICATION SCOPE

**CONSISTING OF 13 PAGES
INCLUDING COVERSHEET**

APPENDIX A

AS-BUILT VERIFICATION SCOPE

Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84494, sh1/3, Rev0	K BASIN LOADOUT PIT AND MCO LOADING EQUIPMENT INTERFACE CONTROL	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84494, sh2/3, Rev0	K BASIN LOADOUT PIT AND MCO LOADING EQUIPMENT INTERFACE ARRANGEMENT	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84494, sh3/3, Rev0	K BASIN LOADOUT PIT AND MCO LOADING EQUIPMENT INTERFACE ARRANGEMENT	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84495, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS RETAINER/SHIELD PLUG GUIDE IMMERSION PAIL	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84496, sh1/3, Rev0	SPENT NUCLEAR FUEL PROJECTS LIFT RIG, SHIELD PLUG, PAD EYE CAPTURING	General	Hoisting and rigging (H&R) manual minimum requirements for identification marks and load testing. Original vendor drawing as-built by vendor (VI 50043).	Hold As-built before use in facility	No components indexed	1. H&R required information on drawing. 2. ECNs Incorporated	2
H-1-84496, sh2/3, Rev0	SPENT NUCLEAR FUEL PROJECTS LIFT RIG, SHIELD PLUG, PAD EYE CAPTURING	General	Hoisting and rigging manual minimum requirements for identification marks and load testing. Original vendor drawing as-built by vendor (VI 50043).	Hold As-built before use in facility	No components indexed	1. H&R required information on drawing. 2. ECNs Incorporated	2
H-1-84496, sh3/3, Rev0	SPENT NUCLEAR FUEL PROJECTS LIFT RIG, SHIELD PLUG, PAD EYE CAPTURING	General	Hoisting and rigging manual minimum requirements for identification marks and load testing. Original vendor drawing as-built by vendor (VI 50043).	Hold As-built before use in facility	No components indexed	1. H&R required information on drawing. 2. ECNs Incorporated	2
H-1-81553, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS SUPPORT STRUCTURE ASSY IMMERSION PAIL	General	None. Original vendor drawing as-built by vendor (VI 50021).		No components indexed	ECNs Incorporated	1
H-1-81545, sh1/2, Rev0	SPENT NUCLEAR FUEL PROJECT IMMERSION PAIL SUPPORT STRUCTURE	General	None. Original vendor drawing as-built by vendor (VI 50021).		No components indexed	ECNs Incorporated	1
H-1-81545, sh2/2, Rev0	SPENT NUCLEAR FUEL PROJECT IMMERSION PAIL SUPPORT STRUCTURE	General	None. Original vendor drawing as-built by vendor (VI 50021).		No components indexed	ECNs Incorporated	1

APPENDIX A

AS-BUILT VERIFICATION SCOPE

Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-81550, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS RIGGING IMMERSION PAIL	General	Hoisting and rigging manual minimum requirements for identification marks and load testing. As-built length and hardware used. Original vendor drawing as-built by vendor (VI 50021).	Hold As-built before use in facility	No components indexed	1. H&R required information on drawing. 2. ECNs Incorporated	2
H-1-81552, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECT LOCK PIN ASSY IMMERSION PAIL	Support	None. Original vendor drawing as-built by vendor (VI 50021).		No components indexed	ECNs Incorporated	1
H-1-84450, sh1/1, Rev0	ALTERED ITEM IMMERSION PAIL IFC SOUTH LOAD-OUT PIT	General	None		No components indexed	ECNs Incorporated	1
H-1-84451, sh1/1, Rev0	ALTERED ITEM IMMERSION PAIL SUPPORT SECTIONS	General	None		No components indexed	ECNs Incorporated	1
H-1-81554, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS SUPPORT EQUIPMENT IMMERSION PAIL	General	Details 33, 34, 35, 39, (entire drawing)		No components indexed	1. Vendor supplied markings match drawing 2. ECNs Incorporated	2
H-1-81543, sh1/2, Rev0	SPENT NUCLEAR FUEL PROJECTS LIFT BEAM ASSY	General	Lift beam to be replaced with redesign (H-1-84726). Original vendor drawing as-built by vendor (VI 50021).		No components indexed	None	N/A
H-1-81543, sh2/2, Rev0	SPENT NUCLEAR FUEL PROJECTS LIFT BEAM ASSY	General	Lift beam to be replaced with redesign (H-1-84726). Original vendor drawing as-built by vendor (VI 50021).		No components indexed	None	N/A
H-1-84726 sh1/2, Rev0	SPENT NUCLEAR FUEL PROJECTS IP LIFT BEAM ASSEMBLY	General	None.		No components indexed	ECNs Incorporated	1
H-1-84726 sh2/2, Rev0	SPENT NUCLEAR FUEL PROJECTS IP LIFT BEAM ASSEMBLY	General	None.		No components indexed	ECNs Incorporated	1
H-1-84352, sh1/2, Rev0	SPENT NUCLEAR FUEL PROJECTS SHUTTLE ASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1

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AS-BUILT VERIFICATION SCOPE

Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84352, sh2/2, Rev0	SPENT NUCLEAR FUEL PROJECTS SHUTTLE ASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84353, sh1/1, Rev2	SPENT NUCLEAR FUEL PROJECTS CART ASSY	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84354, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS CART WELDMENT	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84355, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS WEDGE ASSEMBLY	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84356, sh1/3, Rev0	SPENT NUCLEAR FUEL PROJECTS RAILS AND SUPPORT	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84356, sh2/3, Rev0	SPENT NUCLEAR FUEL PROJECTS RAILS AND SUPPORT	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84356, sh3/3, Rev0	SPENT NUCLEAR FUEL PROJECTS RAILS AND SUPPORT	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84357, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS CABLE MOUNT – CYLINDER	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84358, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS SEISMIC RESTRAINT	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84359, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS CABLE RETURN	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84360, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS CABLE RETURN	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84361, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS UPPER MOUNTS	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84362, sh1/2, Rev0	SPENT NUCLEAR FUEL PROJECTS UPPER MOUNTS	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84362, sh2/2, Rev0	SPENT NUCLEAR FUEL PROJECTS UPPER MOUNTS	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84363, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS RETURN PULLEY ASSY	General	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84032, sh1/3, Rev0	K-BASIN LOADOUT PIT & MCO LOADING EQUIPMENT INSTALLATION PLAN	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84032, sh2/3, Rev0	K-BASIN LOADOUT PIT & MCO LOADING EQUIPMENT INSTALLATION PLAN	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84032, sh3/3, Rev0	K-BASIN LOADOUT PIT & MCO LOADING EQUIPMENT INSTALLATION PLAN	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84030, sh1/2, Rev1	GANTRY SUPPORT STAND ASSEMBLY	General	None		No components indexed	ECNs Incorporated	1
H-1-84030, sh2/2, Rev1	GANTRY SUPPORT STAND SECTIONS AND DETAILS	General	None		No components indexed	ECNs Incorporated	1
H-1-84031, sh1/1, Rev1	GRAPPLE SUPPORT STAND SOUTH LOAD-OUT PIT PLAN AND DETAILS	General	None		No components indexed	ECNs Incorporated	1
H-1-84728, sh1/1, Rev0	SPENT NUCLEAR FUEL PROJECTS LIFT BEAM (PAIL INSTALLATION) ASSEMBLY	General	None		No components indexed	ECNs Incorporated	1
H-1-84380, sh1/1, Rev0	CONTROL STATION, POWER SCHEMATIC, MCO LOADING STATION	Essential	Entire drawing scope.		No components indexed	1. Field matches drawing 2. Labeling in field, Dwg, CID correct. 3. ECNs Incorporated	2
H-1-84381, sh1/2, Rev0	CONTROL STATION, CABINET ASSEMBLY MCO LOADING STATION	General	Labeling. Original vendor drawing as-built by vendor (VI 50043).		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84381, sh2/2, Rev0	CONTROL STATION, CABINET ASSEMBLY MCO LOADING STATION	General	Labeling. Original vendor drawing as-built by vendor (VI 50043).		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84382, sh1/2, Rev0	CONTROL STATION, CABINET WIRING DIAGRAM MCO LOADING STATION	General	Labeling. Original vendor drawing as-built by vendor (VI 50043).		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84382, sh2/2, Rev0	CONTROL STATION, CABINET WIRING DIAGRAM MCO LOADING STATION	General	Labeling. Original vendor drawing as-built by vendor (VI 50043).		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84383 sh1/1, Rev0	CONTROL SYSTEM, FIELD WIRING DIAGRAM MCO LOADING STATION	General	Labeling. Original vendor drawing as-built by vendor (VI 50043).		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84384, sh1/1, Rev0	CONTROL SYSTEM FIELD JUNCTION BOX ASSY MCO LOADING STATION	General	Labeling. Original vendor drawing as-built by vendor (VI 50043).		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84385, sh1/1, Rev0	CCTV BASIN VIEWING STATION CABINET ASSY MCO LOADING STATION	General	Labeling		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84386, sh1/1, Rev0	CCTV REMOTE VIEWING STATION CABINET ASSY MCO LOADING STATION	General	Labeling		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84387, sh1/1, Rev0	CCTV FIELD WIRING DIAGRAM MCO LOADING STATION	General	Labeling		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84370, sh1/3, Rev0	GANTRY ASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84370, sh2/3, Rev0	GANTRY ASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84370, sh3/3, Rev0	GANTRY ASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84371, sh1/5, Rev0	GRAPPLE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84371, sh2/5, Rev0	GRAPPLE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84371, sh3/5, Rev0	GRAPPLE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84371, sh4/5, Rev0	GRAPPLE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84371, sh5/5, Rev0	GRAPPLE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84372, sh1/1, Rev0	DRIVE SCREW MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84373, sh1/5, Rev0	GUIDE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84373, sh2/5, Rev0	GUIDE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84373, sh3/5, Rev0	GUIDE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84373, sh4/5, Rev0	GUIDE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84373, sh5/5, Rev0	GUIDE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84374, sh1/3, Rev0	MAST WELDMENT MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84374, sh2/3, Rev0	MAST WELDMENT MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84374, sh3/3, Rev0	MAST WELDMENT MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84375, sh1/3, Rev0	MISCELLANEOUS COMPONENTS MAST WELDMENT MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84375, sh2/3, Rev0	MISCELLANEOUS COMPONENTS MAST WELDMENT MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84375, sh3/3, Rev0	MISCELLANEOUS COMPONENTS MAST WELDMENT MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No Components Indexed	ECNs Incorporated	1
H-1-84376, sh1/2, Rev0	RAIL SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84376, sh2/2, Rev0	RAIL SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84377, sh1/1, Rev0	BRIDGE DRIVE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84378, sh1/3, Rev0	DRIVE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84378, sh2/3, Rev0	DRIVE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1
H-1-84378, sh3/3, Rev0	DRIVE SUBASSEMBLY MCO LOADING SYSTEM	Support	None. Original vendor drawing as-built by vendor (VI 50043).		No components indexed	ECNs Incorporated	1

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84035, sh1/7, Rev0	POSITIONING JACK SPECIAL TOOLING PARTS LIST	Support	None.		No components indexed	ECNs Incorporated	1
H-1-84035, sh2/7, Rev0	POSITIONING JACK SPECIAL TOOLING FABRICATION DRAWING	Support	None.		No components indexed	ECNs Incorporated	1
H-1-84035, sh3/7, Rev0	POSITIONING JACK SPECIAL TOOLING FABRICATION DRAWING	Support	None.		No components indexed	ECNs Incorporated	1
H-1-84035, sh4/7, Rev0	POSITIONING JACK SPECIAL TOOLING FABRICATION DRAWING	Support	None.		No components indexed	ECNs Incorporated	1
H-1-84035, sh5/7, Rev0	POSITIONING JACK SPECIAL TOOLING ALIGNMENT TOOL	Support	None.		No components indexed	ECNs Incorporated	1
H-1-84035, sh6/7, Rev0	POSITIONING JACK SPECIAL TOOLING FABRICATION DRAWING	Support	None.		No components indexed	ECNs Incorporated	1
H-1-84035, sh7/7, Rev0	POSITIONING JACK SPECIAL TOOLING FABRICATION DRAWING	General	None.		No components indexed	ECNs Incorporated	1
H-1-83771, sh1/1, Rev0	K BASIN SUPPORT STRUCTURE POSITIONING JACKS INSTALLATION	General	None.		No components indexed	ECNs Incorporated	1
H-1-84379, sh1/1, Rev0	K BASIN IMMERSION PAIL TRANSPORT CASK ASSEMBLY & SECTION	Support	As-built added crush pad steel encasement depth and overall length of pail. Original vendor drawing as-built by vendor (VI 50021).		No components indexed	1. Steel encasement depth and overall IP length shown on drawing. 2. ECNs Incorporated	2
H-1-84057, sh1/2, Rev0	K BASIN TRANSPORT CASK IMMERSION PAIL	Support	As-built added crush pad steel encasement depth and overall length of pail. Original vendor drawing as-built by vendor (VI 50021).	Hold As-built before install.	No components indexed	1. Steel encasement depth and overall IP length shown on drawing. 2. ECNs Incorporated	2
H-1-84057, sh2/2, Rev0	K BASIN TRANSPORT CASK IMMERSION PAIL	Support	None. Original vendor drawing as-built by vendor (VI 50021).	Hold As-built before install.	No components indexed	ECNs Incorporated	1
H-1-81546, sh1/2, Rev0	K BASIN IMMERSION PAIL SEAL LID	Support	None. Original vendor drawing as-built by vendor (VI 50021).		No components indexed	ECNs Incorporated	1

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-81546, sh2/2, Rev0	K BASIN IMMERSION PAIL SEAL LID	Support	None. Original vendor drawing as-built by vendor (VI 50021).		No components indexed	ECNs Incorporated	1
H-1-84159, sh1/1, Rev0	ELECTRICAL CTFM – MLS BLOCK DIAGRAM	General	Entire drawing scope.		Components indexed	1. Field matches drawing 2. Labeling in field, Dwg, CID correct. 3. ECNs Incorporated	2
H-1-84160, sh1/5, Rev0	ELECTRICAL CTFM – MLS FIELD WIRING DIAGRAM	General	Entire drawing scope.		Components indexed	1. Field matches drawing 2. Labeling in field, Dwg, CID correct. 3. ECNs Incorporated	2
H-1-84160, sh2/5, Rev0	ELECTRICAL CTFM – MLS FIELD WIRING DIAGRAM	General	Entire drawing scope.		Components indexed	1. Field matches drawing 2. Labeling in field, Dwg, CID correct. 3. ECNs Incorporated	2
H-1-84160, sh3/5, Rev0	ELECTRICAL CTFM – MLS FIELD WIRING DIAGRAM	General	Entire drawing scope.		Components indexed	1. Field matches drawing 2. Labeling in field, Dwg, CID correct. 3. ECNs Incorporated	2
H-1-84160, sh4/5, Rev0	ELECTRICAL CTFM – MLS FIELD WIRING DIAGRAM	General	Entire drawing scope.		Components indexed	1. Field matches drawing 2. Labeling in field, Dwg, CID correct. 3. ECNs Incorporated	2
H-1-84161, sh1/1, Rev0	ELECTRICAL CTFM – MLS CONDUIT & CABLE SCHED	Support	Entire drawing scope.		Components indexed	1. Field matches drawing 2. Labeling in field, Dwg, CID correct. 3. ECNs Incorporated	2
H-1-84163, sh1/7, Rev0	ELECTRICAL PLANS CTFM – MLS NOTES AND B/M	Support	Conduit and junction box identification and labeling.		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84163, sh2/7, Rev0	ELECTRICAL PLANS PARTIAL FLOOR PLAN	Support	Conduit and junction box identification and labeling.		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84163, sh3/7, Rev0	ELECTRICAL PLANS CTFM – MLS SECTIONS	Support	Conduit and junction box identification and labeling.		Components indexed	1. Labeling in field, Dwg. CID correct. 2. ECNs Incorporated	2
H-1-84163, sh4/7, Rev0	ELECTRICAL PLANS CTFM – MLS SECTIONS	Support	Conduit and junction box identification and labeling.		Components indexed	1. Labeling in field, Dwg. CID correct. 2. ECNs Incorporated	2
H-1-84163, sh5/7, Rev0	ELECTRICAL PLANS CTFM – MLS SECTIONS	Support	Conduit and junction box identification and labeling.		Components indexed	1. Labeling in field, Dwg. CID correct. 2. ECNs Incorporated	2
H-1-84163, sh6/7, Rev0	ELECTRICAL PLANS CTFM – MLS TRACK ASSEMBLIES	General	None.		No components indexed	ECNs Incorporated	1
H-1-84163, sh7/7, Rev0	ELECTRICAL PLANS CTFM – MLS TRACK ASSEMBLIES	General	None.		No components indexed	ECNs Incorporated	1
H-1-84440, sh1/3, Rev0	GANTRY TEST WEIGHT ASSEMBLY	General	Verify weights are consistent with notes 7-12 on sheet 1. Hoisting and rigging manual minimum requirements for identification marks and load testing.	Hold As-built before use in facility	No components indexed	1. Weights match drawing requirements 2. H&R required information on drawing. 3. ECNs Incorporated	2
H-1-84440, sh2/3, Rev0	GANTRY TEST WEIGHT DETAILS	General	Verify weights are consistent with notes 7-12 on sheet 1. Hoisting and rigging manual minimum requirements for identification marks and load testing.	Hold As-built before use in facility	No components indexed	1. Weights match drawing requirements 2. H&R required information on drawing. 3. ECNs Incorporated	2
H-1-84440, sh3/3, Rev0	GANTRY TEST WEIGHT DETAILS	General	Verify weights are consistent with notes 7-12 on sheet 1.		No components indexed	1. Weights match drawing requirements 2. ECNs Incorporated	2
H-1-84716, sh1/4, Rev0	SNF PROJECT IMPACT LIMITER SLOP PLAN AND SECTIONS	Support	As-built anchor bolt installation.		No components indexed	1. Anchor bolt installation in field matches drawing. 2. ECNs Incorporated	2
H-1-84716, sh2/4, Rev0	SNF PROJECT IMPACT LIMITER SLOP PLAN AND SECTIONS	Support	As-built anchor bolt installation.		No components indexed	1. Anchor bolt installation in field matches drawing. 2. ECNs Incorporated	2
H-1-84716, sh3/4, Rev0	SNF PROJECT IMPACT LIMITER SLOP PLAN AND SECTIONS	Support	As-built anchor bolt installation.		No components indexed	1. Anchor bolt installation in field matches drawing. 2. ECNs Incorporated	2

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84716, sh4/4, Rev0	SNF PROJECT IMPACT LIMITER SLOP PLAN AND SECTIONS	Support	As-built anchor bolt installation.		No components indexed	1. Anchor bolt installation in field matches drawing. 2. ECNs Incorporated	2
H-1-84489, sh1/2, Rev0	K BASIN IMMERSION PAIL SEAL WATER LEVEL CONTROLLER INSTALLATION	Support	Field As-built "IMMERSION PAIL LEVEL CONTROL ELEMENTARY DIAGRAM"		Components indexed	1. Elementary diagram correct. 2. Labeling in field, Dwg. CID correct. 3. ECNs Incorporated	2
H-1-84489, sh2/2, Rev0	K BASIN IMMERSION PAIL SEAL WATER LEVEL CONTROLLER INSTALLATION	General	None.		No components indexed	ECNs Incorporated	1
H-1-83960, sh1/1, Rev4	LIFTING DEVICES SOUTH LOAD-OUT PIT BRIDGE GANTRY & SHUTTLE	General	None.		No components indexed	ECNs Incorporated	1
H-1-83880, sh1/2, Rev0	OPS INTERFACE MANUAL TOOL HOLDER	General	None.		No components indexed	ECNs Incorporated	1
H-1-83880, sh2/2, Rev0	OPS INTERFACE MANUAL TOOL HOLDER	General	None.		No components indexed	ECNs Incorporated	1
H-1-82085, sh1/1, Rev0	GEN ARRANGEMENT TRANSFER AREA PLAN	General	None.		No components indexed	ECNs Incorporated	1
H-1-83875, sh1/1, Rev0	K BASIN IMMERSION PAIL FUEL BASKET GUIDE TABLE	General	None.		No components indexed	ECNs Incorporated	1
H-1-83876, sh1/1, Rev0	K BASIN IMMERSION PAIL SEAL LID TABLE	General	None.		No components indexed	ECNs Incorporated	1
H-1-83877, sh1/1, Rev0	K BASIN IMMERSION PAIL LIFT BEAM ASSEMBLY CRADLE	General	None.		No components indexed	ECNs Incorporated	1
H-1-83878, sh1/1, Rev0	MCO SHIELD PLUG HANDLING TOOL TABLE	General	None.		No components indexed	ECNs Incorporated	1
H-1-83881, sh1/7, Rev0	OPS INTERFACE WORK PLATFORM SOUTH LOADOUT PIT	General	As-built anchor bolt installation.		No components indexed	1. Field anchor bolt installation matches drawing. 2. ECNs Incorporated	2
H-1-83881, sh2/7, Rev0	OPS INTERFACE WORK PLATFORM SOUTH LOADOUT PIT	General	As-built anchor bolt installation.		No components indexed	1. Field anchor bolt installation matches drawing. 2. ECNs Incorporated	2

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-83881, sh3/7, Rev0	OPS INTERFACE WORK PLATFORM SOUTH LOADOUT PIT	General	As-build anchor bolt installation.		No components indexed	1. Field anchor bolt installation matches drawing. 2. ECNs Incorporated	2
H-1-83881, sh4/7, Rev0	OPS INTERFACE WORK PLATFORM SOUTH LOADOUT PIT	General	As-build anchor bolt installation.		No components indexed	1. Field anchor bolt installation matches drawing. 2. ECNs Incorporated	2
H-1-83881, sh5/7, Rev0	OPS INTERFACE WORK PLATFORM SOUTH LOADOUT PIT	General	As-build anchor bolt installation.		No components indexed	1. Field anchor bolt installation matches drawing. 2. ECNs Incorporated	2
H-1-83881, sh6/7, Rev0	OPS INTERFACE WORK PLATFORM SOUTH LOADOUT PIT	General	None.		No components indexed	ECNs Incorporated	1
H-1-83881, sh7/7, Rev0	OPS INTERFACE WORK PLATFORM SOUTH LOADOUT PIT	General	As-build anchor bolt installation.		No components indexed	1. Field anchor bolt installation matches drawing. 2. ECNs Incorporated	2
H-1-83488, sh1/3, Rev0	SOUTH LOADOUT PIT XFER CHAN GRTG & HNDRL MOD SECTION AND DETAILS	General	None		No components indexed	ECNs Incorporated	1
H-1-83488, sh2/3, Rev0	SOUTH LOADOUT PIT XFER CHAN GRTG & HNDRL MOD DETAILS	General	None		No components indexed	ECNs Incorporated	1
H-1-83488, sh3/3, Rev0	SOUTH LOADOUT PIT XFER CHAN GRTG & HNDRL MOD DETAILS	General	None		No components indexed	ECNs Incorporated	1
H-1-84490, sh1/1, Rev0	He PURGE SYSTEM P&ID	Essential	Component identification and labeling.		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84491, sh1/2, Rev0	He PURGE SYSTEM PLAN AND NOTES	General	None.		No components indexed	ECNs Incorporated	1
H-1-84491, sh2/2, Rev0	He PURGE SYSTEM PLAN AND NOTES	Support	Component identification and labeling.		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84492, sh1/1, Rev0	HELIUM PURGE SYSTEM ISOMETRIC	Support	Component identification and labeling.		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2

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Drawing # or Spec. Section	Drawing Title	Category	Verification Boundary / Characteristics Requiring Verification	Hold for As-built	Component Labeling	Acceptance Criteria	Verification Method
H-1-84493, sh1/2, Rev0	He PURGE SYSTEM GAS BOTTLE RACK ASSEMBLY	General	None.		No components indexed	ECNs Incorporated	1
H-1-84493, sh2/2, Rev0	He PURGE SYSTEM GAS BOTTLE RACK ASSEMBLY	General	None.		No components indexed	ECNs Incorporated	1
H-1-84725, sh1/1, Rev0	He PURGE SYSTEM HEPA ASSEMBLY	Support	None.		No components indexed	ECNs Incorporated	2
H-1-84834, sh1/1, Rev0	He PURGE SYSTEM VALVE STATION ASSEMBLY	Support	Component identification and labeling.		Components indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2
H-1-84713, sh1/2, Rev0	MCO LOADING SYSTEM DWG LIST, LEGEND & NOTES	General	None		No components indexed	ECNs Incorporated	1
H-1-84713, sh2/2, Rev0	MCO LOADING SYSTEM DWG LIST, LEGEND & NOTES	General	None		No components indexed	ECNs Incorporated	1
H-1-84714, sh1/5, Rev0	MCO LOADING SYSTEM FLOW DIAGRAM	General	None		No components indexed	ECNs Incorporated	1
H-1-84714, sh2/5, Rev0	MCO LOADING SYSTEM FLOW DIAGRAM	General	None		No components indexed	ECNs Incorporated	1
H-1-84714, sh3/5, Rev0	MCO LOADING SYSTEM FLOW DIAGRAM	General	None		No components indexed	ECNs Incorporated	1
H-1-84714, sh4/5, Rev0	MCO LOADING SYSTEM FLOW DIAGRAM	General	None		No components indexed	ECNs Incorporated	1
H-1-84714, sh5/5, Rev0	MCO LOADING SYSTEM FLOW DIAGRAM	General	None		No components indexed	ECNs Incorporated	1
H-1-84830, sh1/1, Rev0	P & ID - MLS COMPRESSED AIR	Essential	Component identification and labeling.		Components Indexed	1. Labeling in field, Dwg, CID correct. 2. ECNs Incorporated	2

APPENDIX B

CTFM DEFICIENCY DATA SHEET

**CONSISTING OF 2 PAGES
INCLUDING COVERSHEET**

APPENDIX B
DISCREPANCY DATA SHEET

**K WEST CTFM AS-BUILDING/FIELD VERIFICATION
DISCREPANCY DATA SHEET**

AVP-_____ - _____ Page _____ of _____

System:	Dwg #:		
Safety Classification:	Sht #:	Rev #:	

Item #	Discrepancy Description	Disposition	Closeout

WALKDOWN TEAM LEADER APPROVAL Signature _____ Date _____	WALKDOWN MEMBERS	
	Signature _____	Date _____
	Signature _____	Date _____
	Signature _____	Date _____
	Signature _____	Date _____
	Signature _____	Date _____

DISTRIBUTION SHEET

To: Distribution	From: K. E. Ard			Page 1 of 1	
Project Title/Work Order As-Built Verification Plan for Cask Transportation Facility Modifications (CTFM) – Project A.5/A.6, SNF-6103, Rev. 0				Date: April 17, 2000	
				EDT No. 629209	
				ECN No. N/A	
Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
K. E. Ard	X3-85	X			
K. C. Conrad	X3-80				X
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H. L. Humphreys	X3-85				X
M. T. Husain	X3-74	X			
J. D. Mathews	X3-65				
L. A. Rodgers	X3-85	X			
J. L. Weamer	X3-85	X			
Project Files A.5/A.6	X3-85	X			