

December 5, 2007

Mr. David A. Christian
Senior Vice President and
Chief Nuclear Officer
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: KEWAUNEE POWER STATION
NRC INSPECTION REPORT NO. 072-00064/07-01(DNMS)

Dear Mr. Christian:

On November 27, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed its inspection of the dry cask storage pad construction activities at the Kewaunee Power Station. The purpose of the inspection was to determine whether the dry cask storage pad design and construction activities were conducted safely and in accordance with NRC requirements and design specifications. At the conclusion of onsite inspection on September 15, 2007, the NRC inspectors discussed the preliminary inspection findings with members of your staff. At the conclusion of the inspection on November 27, 2007, during an exit teleconference, the inspectors discussed the final disposition of the issues identified during the inspection. The enclosed report presents the results of this inspection.

The inspection was an examination of the dry fuel storage pad construction activities as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Specifically, the inspectors observed placement of structural fill, reinforcement, and concrete for the storage pad. The inspectors also performed an in-office review of structural calculations related to the storage pad and the haul path. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of selected examinations of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. The violation was associated with a failure to space the reinforcing steel in accordance with design drawings and failure ensure that reinforcing steel adjacent to the face of the concrete had concrete cover within the allowed tolerances in accordance with design drawings during the construction of an Independent Spent Fuel Storage Installation pad. Because this violation was of very low safety significance, was not repetitive or willful, and it was entered into your corrective action program, this violation is being treated as a Non-Cited Violation (NCV), consistent with section VI.A.1 of the NRC Enforcement Policy. The NCV is described in the subject inspection report. If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to: (1) the Regional Administrator, Region III;

D. Christian

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(2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and (3) the Resident Inspector at the Kewaunee Power Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/readingrm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Patrick L. Loudon, Chief
Decommissioning Branch

Docket No. 50-305, 72-064
License No. DPR-43

Enclosure:
Inspection Report 072-00064/07-01(DNMS)

cc w/encl: L. Hartz, Site Vice President
C. Funderburk, Director, Nuclear Licensing
and Operations Support
T. Breene, Manager, Nuclear Licensing
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D. Zellner, Chairman, Town of Carlton
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Letter to Mr. David A. Christian from Patrick L. Loudon dated December 5, 2007

SUBJECT: KEWAUNEE POWER STATION
NRC INSPECTION REPORT NO. 072-00064/07-01(DNMS)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No. 072-00064

License No. DPR-43

Report No. 07200064/07-01(DNMS)

Licensee: Dominion Energy Kewaunee, Inc.

Facility: Kewaunee Power Station

Location: N490 State Highway 42
Kewaunee, WI 54216

Inspection Dates: Onsite: August 7 through August 8, 2007; September 11 through September 12, 2007; and September 14 through September 15, 2007

Exit Teleconference: November 27, 2007

Inspectors: Sarah Bakhsh, Health Physicist
Magdalena Gryglak, Reactor Inspector

Approved by: Patrick L. Loudon, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Kewaunee Power Station NRC Inspection Report 07200064/07-01(DNMS)

The purpose of the inspection was to observe and evaluate the licensee's activities associated with construction of a new Independent Spent Fuel Storage Installation (ISFSI) pad. During this inspection period, the inspectors also reviewed the design of the new pad to ensure compliance with the regulations and the design specifications.

Review of 10 CFR 72.212(b) Evaluations, Appendix A, Review of ISFSI Storage Pad Design

- The inspectors concluded that the licensee adequately characterized the subsurface conditions for the future ISFSI site. The ISFSI pad had been designed in accordance with the Certificate of Compliance, 10 CFR Part 72 requirements, and industry standards. (Section 1.1)

Independent Spent Fuel Storage Pad Construction

- The licensee's site characterization was adequate and the soil compaction activities were performed in accordance with its specifications, design drawings, and industry standards. (Section 2.1)
- The inspectors concluded that overall the construction activities for the ISFSI concrete storage pad complied with specifications contained in the licensee's approved Engineering Change Notice, design drawings, Work Orders, and applicable industry standards. The inspectors identified one violation of 10 CFR 72.150, "Instructions, Procedures, and Drawings." Specifically, the licensee failed to: 1) appropriately space the reinforcing steel as specified in Drawing No. SK-70155348-7; ISFSI Storage Pad And Approach Slabs Sections & Details; Revision 0; and Drawing No. R-1 ISFSI Storage Pad & Approach Slab; and 2) ensure that reinforcing steel adjacent to the face of the concrete had concrete cover within the allowed tolerances in accordance with Drawing No. SK-70155348-1; Revision 1. These findings are being treated as a Non-Cited Violation (NCV) (NCV 07200064/2007-001-01) consistent with Section VI.A.1 of the NRC Enforcement Policy. (Section 2.2)
- The inspectors concluded that the licensee adequately evaluated the proposed transfer route for the expected dry cask loads. (Section 2.3)

Report Details¹

1.0 Review of 10 CFR 72.212(b) Evaluations, Appendix A, Review of ISFSI Storage Pad Design (IP 60856)

1.1 Site Characterization and Design of the ISFSI Pad

a. Inspection Scope

The inspectors evaluated the licensee's soil and engineering design evaluations in preparation for a new dry cask storage pad to verify the licensee's compliance with the Certificate of Compliance (CoC), 10 CFR Part 72 requirements, and industry standards.

b. Observations and Findings

Soil Analysis

The pad was designed in accordance with ACI 318, October 2004. The inspectors reviewed the licensee's structural design analyses. The licensee performed subsurface evaluations and geotechnical engineering analyses of the future ISFSI site. The site had a grade differential of less than one foot. To determine site soil characterization, the licensee's contractor drilled 11 borings within the general vicinity of the ISFSI facility to depths ranging from 10 to 89 feet (ft.) below grade. The inspectors reviewed the licensee's report and the soil boring test results. The soil borings indicated groundwater at depths ranging from 4 to 50 ft. below grade.

The general soil profile of the area consisted of 2 to 4 ft. of topsoil, underlain with approximately 1 to 5 ft. of fill consisting of silty clay and silty sand with gravel. The licensee identified bedrock at approximately 6 ft. below grade.

The licensee's contractor performed an evaluation to determine the bearing pressure from the soil properties from all the soil borings to be 2.55 kips/ft² (ksf) which was within the maximum allowable bearing pressure of 4 ksf. The evaluation indicates average estimated settlement of the future storage pad is expected to be 1.7 inches with a maximum of 2.5 inches.

Seismic Soil Structure Analysis

The licensee's contractor performed an evaluation to assess the liquefaction potential of the site soil during a Design Basis Earthquake (DBE) event. The inspectors reviewed the soil liquefaction evaluation, which concluded that liquefaction for the in-situ soil and compacted fill under the ISFSI pad during a DBE was not a concern. The seismic Soil-Structure-Interaction analysis indicated that the appropriate seismic input motion for the seismic design of the pad was acceptable and also confirmed that the seismic design basis in the NUHOMS Final Safety Analysis Report (FSAR) bounded the seismic motions at the ISFSI pad. The seismic design criteria for the reinforced concrete Horizontal Storage Modules (HSM) and Dry Shielded Canister in the NUHOMS FSAR

¹ A List of acronyms used in the report is included at the end of the Report Details.

are 0.25 g for the maximum horizontal ground acceleration and 0.17 g for the maximum vertical acceleration. The results of the SSI analysis indicated that the maximum seismic horizontal and vertical accelerations at the top of the pad are 0.12 g and 0.09 g, respectively. The inspectors confirmed that these pad site specific seismic ground motion accelerations were bounded by the NUHOMS FSAR cask design basis seismic ground motion accelerations of 0.25 g horizontal and 0.17 g vertical.

The NRC inspectors reviewed Calculation No. 11862-010-ST-02; ISFSI Pad and Approach Slab Design; Revision 0; dated July 3, 2007 as part of the ISFSI pad inspection. Pursuant to this review, inspectors raised questions to the licensee regarding particular sections of the calculation. The inspectors' questions resulted in revisions to the calculation by the contractor. The licensee entered this issue into its corrective action program as Condition Report (CR) 020533.

Soil Liquefaction Analysis

The licensee performed a Soil Liquefaction Evaluation of the potential against liquefaction of the soils underlying the future ISFSI pad. The in-situ soil was mainly brown silty clay which is material classified as not susceptible to liquefaction during earthquakes. The factor of safety for the potential against liquefaction during a DBE event was greater than 1.4, which indicates that the soils at the site and the compacted fill under the pad should not liquefy due to shaking caused by the design earthquake.

c. Conclusion

The inspectors concluded that the licensee adequately characterized the subsurface conditions for the future ISFSI site. The ISFSI pad had been designed in accordance with the CoC, 10 CFR Part 72 requirements, and industry standards.

2.0 Independent Spent Fuel Storage Pad Construction (IP 60853)

2.1 Excavation and soil compaction activities

a. Inspection Scope

The inspectors evaluated the licensee's site characterization, and observed soil compaction activities for the new dry cask storage pad to verify the licensee's compliance with its specifications, design drawings, and industry standards.

b. Observations and Findings

The licensee constructed a new reinforced concrete ISFSI storage pad to the north of the plant. The site's grade elevation varied from 607 ft. to 609 ft. The licensee excavated to approximately 603.5 ft. elevation, ensuring removal of topsoil, organic, and all undesirable material until bedrock was reached. Licensee personnel ensured that there was no moisture seepage prior to proof rolling. Proof rolling of the underlying in-situ material ensured that a suitable subgrade existed under the pad area. Following receipt of satisfactory compaction results for the subgrade, the licensee backfilled the area with 3 ft. of non-frost susceptible granular base material (gravel/sand) in approximately 8 inch layers (lifts) and compacted the fill to a minimum of 95 percent of

the maximum dry density as indicated in American Society for Testing and Materials (ASTM) D 1557.

The inspectors observed certified personnel perform field tests using a moisture density gauge to verify that each individual lift met the minimum compaction, maximum dry density and moisture content as specified in technical specifications and established during laboratory tests. The licensee's contractor obtained this data by performing field tests which included wet and dry density, moisture content, and lift thickness, all within the frequencies required by the appropriate ASTM standards. The moisture content of the second lift was greater than the optimum. The fill was allowed to dry and was recompacted. Moisture tests were again performed and indicated 95 percent maximum dry density compaction had been obtained. The licensee's contractor also obtained samples for tests including the Atterberg Limits (plasticity of the soil) and grain size via the sieve analysis to ensure the structural fill met the specifications at the required frequencies set by the applicable ASTM standards.

c. Conclusion

The licensee's site characterization was adequate and the soil compaction activities were performed in accordance with its specifications, design drawings, and industry standards.

2.2 Pad Construction Activities

a. Inspection Scope

The inspectors evaluated whether construction activities for the ISFSI concrete storage pad complied with specifications contained in the licensee's approved Engineering Change Notice (ECN), design drawings, Work Orders, and applicable industry standards. The inspectors also reviewed select material, batch plant tickets, and personnel certification records.

b. Observations and Findings

The inspectors reviewed an approved Design Description Form which provided specifications for the pad construction activities. The licensee constructed a storage pad to accommodate 32 HSMs, with plans to construct a second storage pad to hold an additional 32 HSMs at a later time. A back to back array with 16 HSMs in each row will be utilized. The storage pad was designed to be a 3 ft. thick, 40 ft. wide and 168 ft long reinforced concrete slab. Due to the available soil and structural conditions of the ISFSI site, the storage pad was supported by a reinforced 50 ft. x 50 ft. concrete mat foundation.

Placement of Reinforcing Steel

The reinforced concrete was designed for a nominal compressive strength of 4,000 psi at 28 days and the reinforcing bars (rebar) conformed to ASTM A615 Grade 60 steel. According to the licensee's drawings, the rebar used for the proposed ISFSI pad were #11 bars to be spaced 9 inches (± 1 inch) apart at the top and bottom face of the storage pad in both orthogonal directions. The U shaped rebars were #9 bars to be spaced 12 inches (± 1 inch) apart. During the NRC inspection, the inspectors identified debris

underneath the rebar where the concrete was to be placed. The licensee cleared the area prior to concrete placement. The inspectors measured the spacing between the rebar and identified some instances where the spacing was outside the allowed tolerance. Along the west side of the proposed pad, the #11 rebar at the top face running east to west was spaced only 5 inches apart which was outside the tolerance allowed by the licensee's drawings. Also, many of the U shaped bars were very loosely tied which allowed the bars to move outside of design tolerances.

The inspectors also observed that the rebar in the southwest corner of the pad had sagged, resulting in a top concrete cover of greater than 3 inches, which was outside the allowed design tolerance. The licensee concluded this was due to the weight of the rebar and the length of time (approximately two weeks) it had been in place. The licensee implemented actions to correct this discrepancy and bring it back into compliance with the design specifications prior to concrete placement. The licensee generated CR 019737 in its corrective action program to document these issues.

Title 10 CFR 72.144, "Quality Assurance Program," requires, in part, that the licensee identify structures, systems, and components to be covered by the quality assurance program.

Dominion's letter to the NRC dated May 16, 2007, states in part, their intent to apply their common, Commission-approved, 10 CFR Part 50, Appendix B quality assurance program (DOM-QA-1) to generally licensed ISFSI activities at the Kewaunee Power Station.

Section 2.1 of DOM-QA-1, "Quality Assurance Program; General Description," states, in part, that Dominion has established a quality assurance program for the nuclear power stations and independent spent fuel storage installations that complies with 10 CFR 50, Appendix B, as amended. The "Introduction" section of the DOM-QA-1 states, in part, that the quality assurance program applies to activities during design, construction, operation, and decommissioning of the nuclear facility. Activities affecting quality include siting, designing, procuring, fabricating, handling, shipping, receiving, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, modifying, and decommissioning.

Section 5.1 of DOM-QA-1, "Instructions, Procedures, and Drawings; General Description," states, in part, that the Company (Dominion) has established and implements administrative controls to assure that activities affecting quality are prescribed by and performed in accordance with documented instructions, procedures, and drawings.

Title 10 CFR 72.150, "Instructions, Procedures, and Drawings," requires, in part, that the licensee prescribe activities affecting quality by documented instructions, procedures, or drawings of a type appropriate to the circumstances. In addition, 10 CFR 72.150 requires that these instructions, procedures, and drawings be followed.

Contrary to the above, on September 11 and September 12, 2007, the inspectors observed that the licensee did not follow the instructions, procedures, and drawings, as specified in 10 CFR 72.150 during an NRC inspection of the reinforcement steel. Specifically, the licensee failed to: 1) appropriately space the reinforcing steel as specified in Drawing No. SK-70155348-7; ISFSI Storage Pad And Approach Slabs

Sections & Details; Revision 0; and Drawing No. R-1 ISFSI Storage Pad & Approach Slab; and 2) ensure that reinforcing steel adjacent to the face of the concrete had concrete cover within the allowed tolerances in accordance with Drawing No. SK-70155348-1; Revision 1. Because this violation was of very low safety significance, was not repetitive or willful, and was entered into your corrective action program, this violation is being treated as a Non-Cited Violation (NCV) of 10 CFR 72.150 (NCV 07200064/2007-001-01). The licensee entered these issues into its corrective action program as CR 019737. The licensee immediately evaluated the situation and where possible, the licensee brought the tolerances back into compliance with design drawings and specifications; otherwise, the licensee issued an Engineering Change Notice (ECN) and accepted the as built condition prior to concrete placement. In addition, an apparent cause evaluation was completed for these issues.

Placement of Concrete for Storage Pad

The inspectors observed that the concrete was transported by conveyor belt into the forms for placement. The inspectors noted that the contractor staff ensured that concrete had an unrestricted vertical drop to the point of placement to prevent segregation of the aggregate. The contractor used a systematic pattern of vibration to ensure proper consolidation, thereby preventing voids in the concrete slabs. The licensee's contractor constructed the proposed ISFSI pad in one continuous placement. The inspectors identified that the contractor staff performed the appropriate concrete testing in accordance with the appropriate ACI standard during construction. The licensee applied a troweled finish to the pad after placement. The top 2-3 inches of finish on the southwest corner of the pad showed some indications of lack of consolidation of the concrete. The licensee's contractor filled and smoothed out the appropriate area.

Concrete Field Tests

The inspectors reviewed the qualification records for the individuals performing field tests for select concrete batches as specified by the ACI-301. The licensee's contractor obtained concrete samples from the middle of the batch at approximately every 100 cubic yards to test air content, unit weight, temperature, and slump tests. The field tests were satisfactory and within the allowed acceptance criteria.

In addition to the field tests, the qualified individuals collected concrete samples in cylinders for the concrete strength tests. The cylinders were adequately stored in accordance with ACI and ASTM standards. The cylinders were cured and tested initially after 7 days and then after 28 days by an independent laboratory to measure the compressive strength of the concrete. The inspectors verified through review of the 28-day laboratory test results that the concrete cylinders taken from the storage pad met the design minimum specified compressive strength of 4000 psi after 28 days of curing time.

In addition to field observations, the inspectors reviewed certification for the following materials used that could affect the quality of the concrete pad and its design function: 1) the reinforcing steel; 2) aggregates; 3) cement; and 4) chemical admixtures. The inspectors verified that the materials used were tested in accordance with applicable codes and met design requirements. The inspectors also reviewed documentation regarding the batch plant certification which was approved in accordance with the

Wisconsin Department of Transportation specifications. The inspectors reviewed quality control records including instrument calibration, batch plant scale calibration, elevation surveys of the structural fill, the forms and the pad, and delivery truck inspection records. The provided material was satisfactory and fulfilled the licensee's commitments.

c. Conclusion

The inspectors concluded that overall the construction activities for the ISFSI concrete storage pad complied with specifications contained in the licensee's approved ECN, design drawings, Work Orders, and applicable industry standards. The inspectors identified one violation of 10 CFR 72.150, "Instructions, Procedures, and Drawings." Specifically, the licensee failed to: 1) appropriately space the reinforcing steel as specified in Drawing No. SK-70155348-7; ISFSI Storage Pad And Approach Slabs Sections & Details; Revision 0; and Drawing No. R-1 ISFSI Storage Pad & Approach Slab; and 2) ensure that reinforcing steel adjacent to the face of the concrete had concrete cover within the allowed tolerances in accordance with Drawing No. SK-70155348-1; Revision 1. These findings are being treated as an NCV (NCV 07200064/2007-001-01) consistent with Section VI.A.1 of the NRC Enforcement Policy.

2.3 Dry Cask Transfer Route

a. Inspection Scope

The inspectors reviewed the licensee's heavy haul road design and underground utilities evaluation to verify that the licensee evaluated the proposed transfer route for the expected loads.

Heavy Haul Road Design and Underground Utilities Analysis

The licensee's contractor performed an Underground Utilities Evaluation under the ISFSI pad, approach slabs, and the heavy haul path. There was a detailed characterization performed of the area to identify any underground commodities that would not be adequate to withstand applied loads. The calculation identified two utilities which were not adequate to support applied loads and the contractor recommended that the licensee place a concrete protection pad over these utilities.

The licensee's contractor also performed a Heavy Haul Road Design evaluation to analyze the existing pavement structure under the heavy haul path. The licensee performed an analysis of the pavement along the ISFSI haul path to determine its acceptability for future use and made recommendations for improvements as necessary. The heavy haul path for movement of the casks extends from the plant Auxiliary Building to the ISFSI pad which is located to the north of the plant. The 8-inch thick concrete road, the 3.5 inch to 4 inch thick asphalt road and the 15 inch culvert located under the ISFSI pad entrance road were analyzed in this evaluation. The inspectors reviewed the evaluation which concluded that the pavement design of the concrete and asphalt pavements were inadequate for the design loads. The 15 inch drainage culvert was not expected to crush during the loadings. The contractor recommended performing visual inspections of the haul paths after every trip by the transporter to ensure there are no localized destruction of the concrete or asphalt. Any defect areas identified are to be built up to the required thicknesses.

b. Conclusion

The inspectors concluded that the licensee adequately evaluated the proposed transfer route for the expected dry cask loads.

3.0 Exit Meeting Summary

On November 27, 2007, the inspectors conducted an exit meeting by telephone to present the results of the inspection. The licensee acknowledged the findings presented and did not identify any information discussed as being proprietary in nature.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

*Tom Breene	Licensing Manager
*Kevin Davison	Recovery Director
*Jack Gadzala	Licensing
*Bill Hofner	Assistant Plant Manager
John Kirchner	Senior Engineering Technician, STS Consultants
*Brian Koehler	Engineering Projects Manager
*David Lohman	ISFSI Project Manager
*Stephen Scase	Site Vice President
*Tom Webb	Safety & Licensing Director

* Persons present during the November 27, 2007, telephone exit meeting.

INSPECTION PROCEDURE USED

IP 60853	Construction of an Independent Spent Fuel Storage Installation
IP 60856	Review of 10 CFR 72.212 (b) Evaluations, Appendix A, Review of ISFSI Storage Pad Design

ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Opened</u>	<u>Type</u>	<u>Summary</u>
07200064/2007-001-01	NCV	Reinforcement spacing and concrete cover
<u>Closed</u>		
07200064/2007-001-01	NCV	Reinforcement spacing and concrete cover
<u>Discussed</u>		
None		

LIST OF DOCUMENTS REVIEWED

Bill of Lading No. 072059-1; dated July 11, 2007

Bill of Lading No. 072063-1; dated July 11, 2007

Bill of Lading No. 071931-1; dated July 10, 2007

Bill of Lading No. 071933-1; dated July 10, 2007

Bill of Lading No. 24854; dated July 10, 2007

Bill of Lading No. 348957; Revision 0; dated July 9, 2007

Calculation No. 11862-010-ST-03; Seismic Soil-Structure Interaction Analysis of ISFSI Pad; Revision 0; dated July 10, 2007

Calculation No. 11862-010-ST-04; Soil Liquefaction Evaluation; Revision 0; dated July 2, 2007

Calculation No. 11862-010-ST-06; Underground Utilities Evaluation; Revision 0; dated July 17, 2007

Calculation No. 11862-010-ST-02; ISFSI Pad Approach Slab Design; Revision 0, dated July 3, 2007

Calculation No. CD020107; Heavy Haul Road Design; Revision 0; dated July 6, 2007

Calculation No. GD061606; Shallow Foundation Design Soil Parameters; Revision 1, dated January 26, 2007

Certified Mill Test Reports (Rebar Certifications)

Concrete Compressive Strength Report; dated November 19, 2007

Daily Report; Concrete Placement Log; dated September 15, 2007

Design and Construction of Independent Spent Fuel Storage Installation Pad Non-Safety; Revision 0; dated July 25, 2007

Drawing No. Figure 1; DCR 3639-2 Design Description Figure 1; Revision 0

Drawing No. R-1; ISFSI Storage Pad & Approach Slab; dated August 1, 2007

Drawing No. SK-70155348-1; ISFSI Facility General Notes; Revision 1

Drawing No. SK-70155348-2; ISFSI Facility Demolition and Initial Site Preparation Plan; Revision 2

Drawing No. SK-70155348-3; ISFSI Facility Erosion and Sediment Control Plan; Revision 1

Drawing No. SK-70155348-4; Erosion and Sediment Control Details; Revision 1

Drawing No. SK-70155348-5; ISFSI Facility Final Grading and Surfacing Plan; Revision 1

Drawing No. SK-70155348-6; Grading Sections & Details; Revision 0

Drawing No. SK-70155348-7; ISFSI Storage Pad and Approach Slabs Sections & Details; Revision 0

Drawing No. SK-70155348-8; ISFSI Facility Storm Sewer Details; Revision 2

Drawing No. SK-70155348-9; Legend and General Construction Notes for Detention Pond; dated December 5, 2006

Drawing No. SK-70155348-10; Detention Pond Site Layout and Erosion Control Plan; dated December 5, 2006

Engineering Change Notice No. 3639-2-003; dated September 13, 2007

Floor Flatness Results for 36-inch Storage Pad per ACI-117-90 SECT. 4.5.7, Tested on 9/17/07; dated September 17, 2007

ISFSI Mat Foundation; Field Compaction Summary; dated August 9, 2007

ISFSI Storage Pad; Sand Cone Compaction Test Data/Summary; dated August 8, 2007

Qualifications of Testing Engineer(s), Field Inspectors, and Laboratory Technicians; Revision 0; dated September 26, 2007

STS Project No. 4-30075; Updated Subsurface Exploration and Geotechnical Engineering Evaluation Report; dated June 23, 2006

LIST OF ACRONYMS USED

ACI	American Concrete Institute
ADAMS	Agencywide Documents Access Management System
ASTM	American Society for Testing and Materials
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
CR	Condition Report
DBE	Design Basis Earthquake
ECN	Engineering Change Notice
FSAR	Final Safety Analysis Report
ft	Feet
g	Acceleration of Gravity
HSM	Horizontal Storage Module
ISFSI	Independent Spent Fuel Storage Installation
kips	a unit of force that equals 1,000 pounds - force
ksf	Kips per square foot
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
psi	Pounds per Square Inch