NRC Enforcement Policy Definitions Associated with Violations in Summary Table

Violation is the failure to comply with a requirement.

Traditional Enforcement, as used in this Policy, refers to the process for the disposition of violations of NRC requirements, including those that cannot be addressed only through the Operating Reactor Assessment Program. Traditional enforcement violations are assigned severity levels and typically include, but may not be limited to, those violations involving (1) actual safety and security consequences, (2) willfulness, (3) impeding the regulatory process, (4) discrimination, (5) violations not associated with Reactor Oversight Process (ROP) or Construction Reactor Oversight Process (cROP) findings, (6) materials regulations, and (7) deliberate violations committed by individuals.

Severity Levels are used (1) to indicate the significance of a violation assessed under traditional enforcement and (2) to determine the appropriate enforcement action to be taken.

For example, Severity Level (SL) IV violations are defined as violations that are less serious, but are of more than minor concern, that resulted in no or relatively inappreciable potential safety or security consequences as noted in Section 2.2.2 of the NRC Enforcement Policy.

Significance, as used in this Policy for violations that do not involve application of the ROP or cROP, describes the seriousness of the violation. The significance of violations assessed under the ROP or cROP is determined by the significance determination process (SDP), described in Inspection Manal Chapter (IMC) 0609 or IMC 2519 and related documents. These documents can be found on the NRC public webpage at the following link: https://www.nrc.gov/reading-rm/doc-collections/insp-manual/

Noncited Violation (NCV) is a nonrecurring, typically nonwillful, SL IV violation or a violation associated with a Green ROP or cROP finding that is not subject to formal enforcement action if, for a reactor licensee, the licensee places the violation in a corrective action (CA) program to address recurrence and restores compliance within a reasonable period of time and, for all other licensees, the licensee corrects or commits to correcting the violation within a reasonable period of time.

Notice of Violation (NOV) is a written notice setting forth one or more violations of a legally binding requirement (see 10 CFR 2.201).

Escalated Enforcement Actions include SL I, II, and III NOVs; NOVs associated with an inspection finding that the SDP evaluates as having low to moderate (white) or greater safety significance; civil penalties; NOVs to individuals; Orders to modify, suspend, or revoke NRC licenses or the authority to engage in NRC-licensed activities; and Orders issued to impose civil penalties.

Item No.	Site / Vendor	Docket Nos.	Type of Inspection	Type of Violation	Summary of Violation	ADAMS No.	CA
1	General Electric-Hitachi (GEH)/NAC International	72-1015	Quality Assurance Fabrication	SL IV NOV	Title 10 of the *Code of Federal Regulations* (CFR) 72.156, "Identification and control of materials, parts, and components." An inspection team identified that the lot number shown on the steel piece being fabricated into the Vertical Concrete Cask (VCC) lift anchor did not match the lot number on the work traveler.	ML111660753	*
2	Holtec	72-1014	Quality Assurance Fabrication	SL IV NOV	10 CFR 72.48(c)(2) (viii), " Changes, test, and experiments." Holtec failed to obtain a certificate of compliance (CoC) amendment for a change to the Final Safety Analysis Report (FSAR) that was a departure from the method of evaluation originally used to establish the safety analysis for cladding integrity during a drop accident event.	ML110450157	*
3	Holtec	72-1014	Quality Assurance Fabrication	SL IV NOV	10 CFR 72.146, "Design Control." Holtec failed to apply design control measures to a thermal-hydraulic design. Specifically, Holtec's design control measures were not adequate for four examples.	ML110450157	*
4	Holtec	72-1014	Quality Assurance Fabrication	SL IV NCV	10 CFR 72.170, "Nonconforming materials, parts, or components." The inspection team identified a non-cited violation (NCV) regarding Holtec not dispositioning and properly accepting a nonconforming condition that affected multiple multi-purpose canister (MPC) baskets in accordance with nonconformance control procedures.	ML17320A387	*
5	Custom Nuclear Fabrication (CNF)/	72-1004	Quality Assurance Fabrication	SL IV NCV	10 CFR 72.154, "Control of Purchased Material, Equipment, and Services." The inspection team identified that CNF did not prepare or generate an external audit	ML16243A392	*

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	Transnuclear (TN)				schedule and subsequently missed a number of annual vendor evaluations.		
6	GEH/NAC International	72-1021	Quality Assurance Fabrication	SL IV NOV	10 CFR 72.150, "Instructions, procedures, and drawings." The inspection team identified that the fabricator failed to follow or have adequate procedures for nine different examples. Some of the examples are as follows: 1) improper use of a third-party vendor for auditing that wasn't a part of the supplier's list; 2) an equipment part wasn't tagged appropriately; 3) adequate procedural controls in regards to temporary weld attachments were not prescribed; and 4) a portion of the quality assurance program (QAP) did not provide proper controls to maintain data for a welding process.	ML080650152	*
7	GEH/NAC International	72-1021	Quality Assurance Fabrication	SL IV NOV	10 CFR 72.158, "Control of special processes." The inspection team identified that a welder was shown as qualified to perform two separate welding processes, yet his qualification had lapsed.	ML080650152	*
8	ENSA Spain/ TN	72-1027	Quality Assurance Fabrication	SL IV NOV	10 CFR 72.150, "Instructions, procedures, and drawings." The inspection team identified seven different examples. Some of the examples are as follows: 1) Reports that were required did not apply to related fabrication activities, 2) ENSA issued revisions for deviation reports and others, but did not prescribe how to make revisions, and 3) non-destructive examinations (NDEs) were not approved by the appropriate Method Level III individual.	ML082950304	*

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9	Columbiana Hi-Tech (CHT)/TN	72-1004	Quality Assurance Fabrication	SL IV NCV	10 CFR 72.150, “Instructions, procedures, and drawings.” The inspection team identified four examples. For instances, CHT procedure Q-03, "Welding Performance Qualification Testing & Records," Revision 2, Step 4.1.6, states, in part, that the welding engineer shall complete the Record of Welder Performance Qualification form or Record of Welding Operator Performance Qualification form, as appropriate, and sign and date the form. Contrary to the above, the NRC identified during a review of welder qualification records that the welding engineer failed to complete the Record of Welder Performance Qualification form for a CHT welder (W-57).	ML18215A387	*
10	Kobe Steel Limited (KSL) Kobe, Japan & Sedae Enertech (SEC), South Korea/TN	72-1004	Quality Assurance Fabrication	SL IV NOV	10 CFR 72.150, "Instructions, procedures, and drawings." The inspection team identified three different examples. For instance, as required by procedures, appropriate markings for a material were not in accordance with the designation listed on the certified material test report.	ML13008A602	*
11	Hitachi Zosen, Japan/TN	72-1004 72-1030	Quality Assurance Fabrication	SL IV NCV	10 CFR 72.150, "Instructions, procedures, and drawings." The inspection team identified that the AREVA TN fabricator Hitachi Zosen did not follow prescribed instructions and procedures for activities affecting quality.	ML16187A007	*
12	AREVA/TN	72-0003 72-0010 72-0020 72-1004 72-1021 72-1022	Quality Assurance	SL IV NCV	10 CFR 72.242, “Recordkeeping and reports.” TN did not submit written reports to the NRC within 30 days of discovery of a design or fabrication deficiency for spent fuel storage casks delivered to a licensee.	ML16126A546	*

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		72-1027 72-1029 72-1030					
13	Premier Technologies Incorporated (PTI)/TN	72-1004	Quality Assurance Fabrication	SL IV NOV	10 CFR 72.150, "Instructions, procedures, and drawings." The inspection team identified instances where activities affecting quality were not prescribed in documented procedures or procedures for activities affecting quality were not followed. The inspection team identified three different examples. For instance, PTI did not have proper quality instructions for a) performing work at risk while awaiting customer approval of nonconforming items and b) distribution of design change notices (DCN)s to control drawings prior to issuance of revised drawings incorporating the DCN's.	ML13267A145	*
14	Larsen & Toubro Limited Ranoli Works, India/TN Americas	72-1004	Quality Assurance Fabrication	SL IV NCV	10 CFR 72.154, "Control of purchased material, equipment and services." The team identified the following example of where TN Americas did not have available documentary evidence that material conformed to the procurement specifications. TN Americas' procurement of Helicoils and washers classified as important-to-safety Category A components was incomplete. Specifically, verification of critical characteristics and objective evidence in the test report did not contain sufficient evidence that critical characteristics were adequately verified through the inspection and tests (method 1) dedication report process.	ML18127A058	*

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15	Braidwood	72-0073	Pre-operational inspection	SL IV NCV	10 CFR 72.212(b)(5)(ii); 10 CFR 72.212(b)(8); "Conditions of general license issued under 72.210." The inspection team identified that the licensee failed to perform adequate evaluations of the Independent Spent Fuel Storage Installation (ISFSI) pad, ISFSI components, and the effects of ISFSI loading operations on the operating plant.	ML12041A339	*
16	Braidwood	72-0073	Initial Loading	SL IV NCV	10 CFR 72.150, "Instructions, procedures, and drawings." The inspection team identified that the licensee failed to adhere to procedures to ensure that the design pressure limit for the multi-purpose canister (MPC) would not be exceeded during loading operations.	ML12041A339	*
17	Braidwood	72-0073	Operation of an ISFSI at Operating Plants	Green Finding and associated NCV	10 CFR 50, Appendix B, Criterion III, "Design Control." The inspection team identified that the licensee failed to adhere to design requirements specified for a special lifting device used to handle a transfer cask containing spent nuclear fuel near the spent fuel pool.	ML13226A358	*
18	Byron	72-0068	Reactive	SL IV NCV	10 CFR 72.150, "Instructions, procedures, and drawings." The inspection team identified that the licensee failed to have procedures in place to ensure that the design basis peak fuel cladding temperature limit would not be exceeded during vacuum drying operations. Although the violation contributed to the likelihood of peak fuel cladding temperatures exceeding the safety limit, subsequent analysis by the licensee and the NRC determined that fuel cladding temperature limits were not exceeded.	ML103140226	*

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19	Clinton	72-1046	Initial loading	SL IV NCV	10 CFR 72.150, "Instructions, procedures, and drawings." The inspection team identified a failure of the licensee to ensure that ISFSI procedures contained the appropriate level of detail for the circumstances such that important loading activities would be satisfactorily accomplished. Specifically, procedure HPP–2226–200, Revision 0, "MPC Loading at Clinton," was not adequate to ensure that the Multi-Purpose Canister (MPC) was correctly oriented in the transfer cask (HI-TRAC) and procedure HPP–2226–300, Revision 4, "MPC Sealing at Clinton," was not adequate to ensure that two thermocouples were appropriately installed during the hydrostatic test of the MPC.	ML17044A466 ML17041A302	*
20	Clinton	72-1046	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.48(c)(2), "Changes, tests, and experiments." The inspection team identified a failure to perform a written evaluation, which provides the bases for the determination that changes do not require a Certificate of Compliance amendment. Specifically, the licensee accepted engineering change orders (ECOs) ECO–5018–25R0, ECO–5018–48R1, and ECO–5018–48R1 on June 20, 2016, to the time-to-boil calculation as described in the HI-STORM FW Final Safety Analysis Report and incorrectly screened out performing an evaluation of those changes in accordance with 10 CFR 72.48 criteria.	ML18043A594	*

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21	Davis-Besse	72-0014	Pre-operational inspection	SL IV NCV	10 CFR 72.174, "Quality assurance records." The inspection team identified a failure to maintain sufficient records to furnish evidence of activities affecting quality. Specifically, the licensee failed to maintain ultrasonic testing (UT) records for fuel assemblies, which were relied upon to demonstrate that the spent fuel selected for loading in the cask was correctly classified as intact, as required by calculation C-NF-062.02-055, Revision 0.	ML17318A050	*
22	DC Cook	72-0072	Initial Loading	SL IV NCV	10 CFR 72.150, "Instruction, procedures, and drawings." The inspection team identified failure of the licensee to have procedures in place to ensure that the design basis peak fuel cladding temperature limit would not be exceeded during dry cask canister processing operations. The licensee took actions prior to conducting evolutions that may have challenged these limits.	ML12305A185	*
23	Dresden	72-0037	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, "Instruction, procedures, and drawings." The inspection team identified the licensee failed to follow procedures that are relied upon to ensure that fuel oxidation does not occur during canister loading activities. Specifically, the licensee intended, but failed to follow procedure DFP 0800-71, "MPC Processing," that affected quality and relied upon to ensure that fuel oxidation would not occur during canister loading activities.	ML14209A395	*
24	Duane Arnold	72-0032	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.212(b)(6), "Conditions of general license issued under 72.210." The inspection team identified failure of the licensee, as of June 9, 2003, to determine whether reactor site parameters were enveloped by the cask	ML18022B111	*

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					design bases as considered in the FSAR. Specifically, the licensee failed to evaluate site-specific fire and explosion hazards that could be near the dry cask storage systems under its administrative control procedure (ACP)-1412.2, "Control of Combustibles," Revision 48.		
25	Fermi	72-0071	ISFSI Construction	SL IV NCV	10 CFR 72.212(b)(2)(i)(B), "Conditions of general license issued under 72.210." The inspection team identified that the licensee failed to adequately evaluate the cask storage pad to support static and dynamics loads of the stored casks considering potential amplification of earthquakes.	ML110740802	*
26	Fermi	72-0071	Pre-operational inspection	Green finding and associated NCV	10 CFR 50, Appendix B, Criterion III, "Design Control." The licensee failed to provide adequate design control measures for the reactor building radial girders, reactor building concrete floor slab and beam structures, spent fuel pool structure, and spent fuel cask leveling plate which were used to support the spent fuel cask placement.	ML112140118	*
27	LaCrosse Boiling Water Reactor (LACBWR)	72-0046	Pre-operational inspection	SL IV NCV	10 CFR 72.146, "Design Control." The licensee failure to perform adequate evaluations to ensure compliance with 10 CFR 72.122(c) and 10 CFR 72.212(b)(6). Specifically, during the period between October 2011 and June 2012, the inspectors identified that the licensee failed to adequately evaluate that the reactor site parameters were enveloped by the MPC-LACBWR design basis, and that the Vertical Concrete Cask (VCC) and associated Transportable Storage Canister (TSC) were not required to withstand	ML12236A129	*

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					the effects of site specific fire and explosion hazards because specific haul path hazards were not credible.		
28	LACBWR	72-0046	Pre-operational inspection	SL IV NCV	10 CFR 50, Appendix B, Criterion III, “Design Control.” The licensee failure to establish measures for the selection and review for suitability of application of the crushable energy absorbing component essential to the safety related functions of the structures, systems, and components during a rope break accident of the single failure proof trolley dual rope reeving system as a part of the temporary cask handling system (crane).	ML12236A129	*
29	Perry	72-0069	Pre-operational inspection	SL IV NCV	10 CFR Part 72.146, “Design Control.” The inspectors identified a failure of the licensee to incorporate applicable regulatory requirements and the design basis into the seismic evaluation of the stack-up configuration during MPC transfer operations. Specifically, a dynamic stability determination of the stack-up during a postulated seismic event, in lieu of providing lateral restraints, does not meet design basis requirements as described in the Holtec HI-STORM 100 FSAR.	ML110700566	*
30	Perry	72-0069	Initial Loading	Green finding and associated NCV	10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings.” Failure to perform adequate maintenance on the single-failure-proof fuel handling building (FHB) crane used to handle dry storage casks containing spent nuclear fuel.	ML13038A702	*
31	Perry	72-0069	Initial Loading	SL IV NCV	10 CFR 72.150, "Instructions, Procedures, and Drawings." Failure by the licensee to follow procedures that ensured the safe loading of a dry fuel storage canister into a storage cask.	ML13038A702	*

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32	Prairie Island	72-0010	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, "Instructions, Procedures and Drawings." Failure to perform technical specification surveillance requirement testing with a procedure appropriate to the circumstance that affects the casks. The procedure did not have appropriate acceptance criteria.	ML13134A360	*
33	Indian Point	72-0051	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.212(b)(2)(ii), "Conditions of general license issued under 72.210." and 72.48(c), "Changes, tests, and experiments." Licensee personnel failed to evaluate a change to the written evaluation described in its Updated Final Safety Analysis Report (UFSAR) prior to implementing the change.	ML100400177	*
34	Pilgrim	72-1044	Pre-operational inspection	SL IV NCV	10 CFR 50.59 & 72.48, "Changes, tests, and experiments." The licensee made changes to the plant that affected a specific technical specification without obtaining a license amendment pursuant to 10 CFR 50.90. Specifically, Entergy removed the energy absorbing pad described in TS 4.3.4.b, "Design Features," and Updated Final Safety Analysis Report (UFSAR) section 10.3.6, "Consequences of a Dropped Fuel Cask," without receiving prior NRC approval.	ML15037A163	*
35	Seabrook	72-0063	Pre-operational inspection	SL IV NCV	10 CFR 72.212, "Conditions of general license issued under 72.210." The licensee did not conduct a pre-operational demonstration that adequately represented the conditions encountered during welding of the lid of the initial dry storage canister (DSC), which resulted in increased time to process the initial cask and increased radiological dose to the workers.	ML083400036	*

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36	Ginna	72-0067	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, "Instructions, Procedures, and Drawings," The licensee did not have adequate instructions and procedures to ensure that a slight helium overpressure was maintained on the DSC during bulk water removal.	ML16232A051	*
37	Nine Mile Point	72-1036	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, "Instructions, Procedures, and Drawings." The licensee did not properly implement their procedure to ensure the transporter remained on the heavy haul path at all times; and as a result, the transporter with the transfer cask and loaded dry shielded canister traveled over an unanalyzed surface.	ML15314A506	*
38	Limerick	72-0065	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, "Instructions, Procedures, and Drawings." The licensee did not provide adequate direction to shut the discharge valve after a partial drain down of water inventory was completed on the DSC during bulk water removal in the procedure.	ML15307A386	*
39	Indian Point	72-0051	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, "Instructions, Procedures, and Drawings." The licensee did not properly implement their procedure to ensure the fuel bundles were loaded in the correct positions in the MPC; and as a result, the initial bundle was placed in the wrong position.	ML17131A128	*
40	Nine Mile Point	72-1036	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, "Instructions, Procedures, and Drawings." The licensee did not provide adequate direction for the control of purging and hydrogen monitoring calibration, set-up, and operation during welding on a dry shielded container. As a result, there was an undetected loss of DSC purge and a failure of the hydrogen monitor, ultimately resulting in a hydrogen deflagration.	ML14041A150	*

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41	Salem	72-0048	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, "Instructions, Procedures, and Drawings." The licensee identified a non-cited violation because they selected the incorrect helium backfill pressure range table from their procedure resulting in two MPCs being backfilled with the wrong helium pressure range.	ML16315A157	*
42	Vermont Yankee	72-0059	Initial Loading	Green Finding	A self-revealing finding against the licensee's preventive maintenance (PM) program was identified because Entergy did not fully develop an adequate PM program for the reactor building crane (RBC). As a result, on May 12, 2008, when the first loaded spent fuel storage cask was removed from the spent fuel pool (SFP) and was being lowered to a height of four inches above the refueling floor, the crane brakes did not engage and the spent fuel storage cask continued to be slowly lowered to the refueling floor.	ML082740170	*
43	North Anna	72-0056	Operation of an ISFSI at Operating Plants	SL IV NCV	Certificate of Compliance 1030, Amendment 0, Technical Specifications 2.1.c, Functional and Operating Limits. The licensee identified that it failed to properly load fuel assemblies into seven NUHOMS Dry Shielded Canisters (DSCs) resulting in the fuel assemblies exceeding the decay heat limit for the loading zones in two of the four center zones.	ML112092630	*

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44	Surry	72-0055	Operation of an ISFSI at Operating Plants	SL IV NCV	Certificate of Compliance 1030, Amendment 0, Technical Specifications 2.1.c, Functional and Operating Limits. The licensee identified that it failed to properly load fuel assemblies into seven NUHOMS Dry Shielded Canisters (DSCs) resulting in the fuel assemblies exceeding the decay heat limit for the loading zones in two of the four center zones.	ML112092845	*
45	Browns Ferry	72-0052	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.212 "Conditions of general license issued under 72.210." The licensee failed to evaluate combustible materials located well within the 150 feet exclusion zone of the ISFSI as prescribed in licensing drawings. The outside operator also failed to report the transient combustible material and perform a fire hazards evaluation.	ML111330758	*
46	Catawba	72-0045	Pre-operational inspection and initial loading activities of spent fuel	SL IV NCV	10 CFR 72.212(b)(6) & 72.212(b)(8), "Conditions of general license issued under 72.210." The licensee failed to adequately evaluate a cask drop accident during ISFSI loading activities.	ML13176A110	*
47	San Onofre Generating Station (SONGS)	72-0041	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.48, "Changes, tests, and experiments." The licensee had approved the loading procedure with steps that resulted in isolating the canister, contrary to the requirements specified in the NUHOMS final safety and analysis report. This was a failure to perform an adequate 72.48 evaluation for a procedure revision.	ML111430612	*

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48	Grand Gulf	72-0050	Operation of an ISFSI at Operating Plants	SL IV NCV	Certificate of Compliance 1014, Amendment 2, Condition 6. Failure to meet CoC Condition 6 requirement for loading fuel in compliance with CoC Appendix B specifications. Specifically, the licensee did not meet the fuel specifications for maximum allowable decay heat and fuel burn-up limits.	ML083510602	*
49	Grand Gulf	72-0050	Operation of an ISFSI at Operating Plants	SL IV NCV	ISFSI License Technical Specification 3.1.4. Failure to have operable Supplemental Cooling System when fuel assemblies exceeded 45,000 MWD/MTU as required by TS 3.1.4.	ML083510602	*
50	Grand Gulf	72-0050	Operation of an ISFSI at Operating Plants	SL IV NCV	Certificate of Compliance 1014, Condition 2. Failure to meet CoC Condition 2 to have adequate procedures, which caused Casks 15 - 17 to be backfilled with less helium than specified in the technical specification.	ML12303A002	*
51	Rancho Seco	72-0011	Away from Reactor (AFR) ISFSI Inspection	SL IV NCV	ISFSI License Technical Specification 2.1.1. The licensee loaded six potentially damaged fuel assemblies into storage canisters not specifically designed for failed fuel during the cask loading campaign in 2001 and 2002.	ML101320569	*
52	Comanche Peak	72-0074	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, “Instructions, Procedures, and Drawings.” The licensee's failure to establish a foreign material exclusion (FME) monitor and an FME log during certain dry fuel storage evolutions, as required by site procedures.	ML18206A160	*
53	Cooper	72-0066	Pre-operational inspection and initial loading activities of spent fuel	SL IV NCV	10 CFR 72.150, “Instructions, Procedures, and Drawings.” The licensee’s failure to follow procedures that resulted in the unintentional draining of the transfer cask neutron shield.	ML12192A620	*

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54	Diablo Canyon	72-0026	Pre-operational inspection and initial loading activities of spent fuel	SL IV NCV	10 CFR 72.170, “Nonconforming materials, parts, or components.” The licensee failure to control the use of the HI-TRAC transfer cask to prevent inadvertent use after identification of a nonconforming indentation on the side of the cask.	ML092220629	*
55	Diablo Canyon	72-0026	Operation of an ISFSI at Operating Plants	SL IV NOV	10 CFR 72.48(c)(1), “Changes, tests, and experiments.” The licensee did not perform an inadequate safety review of a procedure change that allowed the licensee to take steps that were not consistent with Chapter 5 of the FSAR and resulted in the isolation of the canister, while filled with water, which created the possibility of an accident not evaluated in the FSAR.	ML13140A430	*
56	Waterford	72-0075	Pre-operational inspection and initial loading activities of spent fuel	SL IV NCV	Certificate of Compliance #1014, License Condition 2, "Operating Procedures." The licensee implemented written procedures that were not consistent with Chapter 8 of the FSAR and resulted in isolation of the canister from the relief valves for a period of 13 minutes.	ML12124A387	*
57	Waterford	72-0075	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.150, “Instructions, Procedures, and Drawings.” The licensee failed to prescribe activities affecting quality with appropriate procedures, which did not include appropriate instructions affecting lift height requirements when using a non-single-failure-proof crane.	ML14211A671	*

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58	Arkansas Nuclear One	72-0013	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.164, “Control of Measuring and Test Equipment.” The licensee failed to calibrate measuring and test equipment (M&TE) used for a thermal validation test under the Arkansas Nuclear One quality assurance program.	ML13057A986	*
59	Arkansas Nuclear One	72-0013	Operation of an ISFSI at Operating Plants	SL IV NCV	Certificate of Compliance #1014, License Condition 2, "Operating Procedures." The licensee failed to have adequate procedures, which resulted in backfilling Casks 31, 35, 36, and 37 with less helium than specified in the technical specifications.	ML13057A986	*
60	Arkansas Nuclear One	72-0013	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.212(b)(6), “Conditions of general license under 72.210.” The licensee failed to perform an inadequate review and analysis to ensure cask design parameters were encompassed within the site’s parameters regarding earthquake intensity.	ML13057A986	*
61	Arkansas Nuclear One	72-0013	Operation of an ISFSI at Operating Plants	SL IV NCV	Certificate of Compliance #1014, Technical Specifications (TS) Appendix B, Table 2.1-1.I.D. The licensee failed to load fuel in accordance with the approved contents for the MPC-24 canister.	ML16021A485	*
62	Arkansas Nuclear One	72-0013	Operation of an ISFSI at Operating Plants	SL IV NCV	Certificate of Compliance #1014, Appendix B, Section 3.5.2.2. The licensee failed to perform frequent and annual inspections on their mobile lifting device in accordance with license requirements.	ML16021A485	*
63	Columbia	72-0035	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.212(b)(2)(ii), “Conditions of general license under 72.210.” The licensee failed to revise a written evaluation in the 72.212 report without performing a 10 CFR 72.48 screen/evaluation for the change.	ML081690841	*

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64	Columbia	72-0035	Operation of an ISFSI at Operating Plants	SL IV NOV	Certificate of Compliance #1014, Appendix B, Section 3.8. The licensee failed to monitor combustible gas concentrations under the MPC lid during the MPC lid-to-shell welding operations to ensure that no combustible gas mixture was present in the welding area.	ML081690841	*
65	Byron	72-0068	Pre-operational inspection	Green finding and associated NCV	10 CFR 50, Appendix B, Criterion III, "Design Control." The licensee failed to perform an adequate evaluation of seismic restraint on the FHB crane trolley, which could impact the cask following a seismic event.	ML093100141	*
66	Byron	72-0068	Pre-operational inspection	Green finding and associated NCV	10 CFR 50, Appendix B, Criterion III, "Design Control." The licensee failed to perform adequate evaluations to upgrade the single failure proof crane.	ML103080178	*
67	Byron	72-0068	ISFSI Pad Construction	SL IV NCV	10 CFR 72.212 (b)(2)(i)(B), "Conditions of a General License Issued under 72.210." The licensee failed to perform adequate evaluations of the ISFSI pad, which included four examples where the licensee failed to design the ISFSI pad to adequately support the static and dynamic loads of the stored casks.	ML103080178	*
68	Byron	72-0068	Initial Loading	SL IV NCV	10 CFR 72.150, "Instruction, Procedures, and Drawings." The licensee failed to have procedures in place to ensure that the design basis peak fuel cladding limit would not be exceeded during canister loading operations.	ML110310602	*
69	Byron	72-0068	Initial Loading	SL IV NCV	10 CFR 72.150, "Instructions, Procedures, and Drawings." The licensee failed to have procedures in place to ensure that heavy loads were operated safely in the Fuel Handling Building.	ML110310602	*

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70	DC Cook	72-0072	ISFSI Pad Construction	SL IV NCV	10 CFR 72.212 (b)(5)(ii), "Conditions of general license issued under 72.210." The inspectors identified two examples where the licensee's evaluations failed to demonstrate that the ISFSI pad was designed to adequately support the static and dynamic loads of the stored casks.	ML12240A132	*
71	Dresden	72-0037	Operation of an ISFSI at Operating Plants	Enforcement Discretion EGM-09-006	10 CFR Part 72, Subpart K, General License for Storage of Spent Fuel at Power Reactor Sites, for applying all of the changes described by CoC amendments listed in 10 CFR 72.214 to previously loaded casks prior to issuance of a proposed NRC rule revision and without obtaining NRC approval.	ML102110519	*
72	Dresden	72-0037	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 50 Appendix B, Criterion III, "Design Control." The licensee failed to verify the adequacy of the design for HI-STORM 100 cask system laydown areas in the reactor building that could result in additional impact loads during a seismic event.	ML12293A352	*
73	Dresden	72-0037	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.146, "Design control." The licensee failed to verify the adequacy of the design of the HI-STORM 100 lift yoke.	ML12293A352	*
74	Kewaunee	72-0064	Pre-operational inspection	Green finding and associated NCV	10 CFR Part 50, Appendix B, Criterion III, "Design Control." The licensee's failure to provide an adequate single failure proof design basis analysis for the 105-ton transfer cask lifting beam.	ML093170497	*
75	Kewaunee	72-0064	Operation of an ISFSI at Operating Plants	SL IV NCV	10 CFR 72.146, "Design control," The inspectors identified failure of the licensee to incorporate the lifting yoke, a safety related device, into the licensee's Quality Assurance Program. Specifically, the inspectors	ML11313A173	*

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					identified that the licensee did not have measures in place to ensure suitability of materials, parts, equipment, and processes, which are important to safety.		
76	Kewaunee	72-0064	Pre-operational inspection	SL IV NCV	10 CFR 50.59(c)(2)(v), "Changes, tests, and experiments." The licensee approved procedure MRS-SSP-3236, which allowed the use of a non-single failure proof lifting device to handle a canister containing spent fuel. Using a non-single failure proof lifting device was inconsistent with the licensing basis and created the possibility of dropping a cask, an accident of a different type than described in the KPS USAR, which would require a license amendment pursuant to 10 CFR 50.59.	ML16235A301	*
77	LaSalle	72-0070	Pre-operational inspection	Green finding with associated NCV	10 CFR Part 50, Appendix B, Criterion III, "Design Control." The licensee failed to perform adequate evaluations to upgrade the single failure proof crane to handle storage cask. Specifically, the inspectors identified five examples where the licensee failed to perform adequate evaluations in accordance with American Society of Mechanical Engineers (ASME) NOG-1-2004, "Rules for Construction of Overhead and Gantry Cranes (Top Running and Bridge, Multiple Girder)," requirements.	ML110350483	*

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78	LaSalle	72-0070	Pre-operational inspection	SL IV NCV	10 CFR 72.212 (b)(2)(i)(B), "Conditions of a general license issued under 72.210." The licensee's failure to perform adequate evaluations of the ISFSI pad. Specifically, the inspectors identified five examples where the licensee failed to design the ISFSI pad to adequately support the static and dynamic loads of the stored casks, considering potential amplification of earthquakes through soil-structure interaction.	ML110350483	*
79	LaSalle	72-0070	Pre-operational inspection	SL IV NCV	10 CFR 72.146, "Design control." The licensee's failure to perform adequate evaluations to ensure compliance with 10 CFR 72.212(b)(3) and 10 CFR 72.122 (b)(2)(i). Specifically, the inspectors identified that the licensee failed to evaluate that the reactor site parameters including analyses of tornado effects were enveloped by the cask design basis, and perform additional analysis to ensure compliance with 10 CFR 72.122(b)(2)(i).	ML110350483	*
80	Monticello	72-0058	Pre-operational inspection	SL IV NCV	10 CFR 72.146, "Design control." A licensee's failure involving the design basis analysis performed for the Rail Car Shelter for ISFSI transfer operations. Specifically, the inspectors identified a failure to assure and verify structural integrity of the Rail Car Shelter because of a design basis tornado event in accordance with ISFSI licensing requirements.	ML083660296	*
81	Monticello	72-0058	Operation of an ISFSI at Operating Plant	SL III AV	The AV involves Title 10 of the *Code of Federal Regulations* (CFR) 72.158, "Control of Special Processes." The licensee established TriVis Procedure 12751 QP-9.202, "Color Contrast Liquid Penetrant Examination Using	ML15203B187 ML15351A512	*

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					the Solvent-Removable Method," Revision 1, as the qualified procedure for use in Dry Shielded Canister (DSC) NDE penetrant testing (PT). However, from approximately September 5 to October 17, 2013, the NRC determined that licensee contractors apparently willfully failed to follow the TriVis procedure for developer dwell times, while performing PT on DSC closure welds examined. The NRC also determined that the licensee contractors apparently failed to follow other parts of the TriVis procedure. This violation was closed to a confirmatory order for action.		
82	Monticello	72-0058	Operation of an ISFSI at Operating Plant	SL IV NCV	Title 10 CFR 72.158, "Control of special processes." The licensee identified on May 10, 2014, the licensee failed to perform verifications of a calibrated leak test instrument used on DSC lid to shell welds in accordance with Procedure TN 61BT-61BTH-HSMLD, "Helium Leak Testing for NUHOMS Systems," Revision 1. Procedure TN 61BT-61BTHHSMLD, Revision 1, performs helium leak tests to demonstrate compliance with TS 1.2.4.a, "61BTH DSC Helium Leak rate of Inner Seal Weld." Additionally, contrary to 10 CFR 72.158, on April 2, 2014, the licensee failed to ensure enough filler material was deposited to achieve the minimum depth of the shell to outer top cover plate weld on DSC 16 in accordance with Procedure 12751-MNGP-OPS, "Spent Fuel Cask Welding: 61BT/BTH NUHOMS Canisters," Revision 0. Instructions for welding operations are	ML15203B187	*

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					provided in Procedure 12751 MNGP-OPS, Revision 0, to ensure in field fabrication is performed in accordance with the Final Safety Analysis Report design basis drawings.		
83	Palisades	72-0007	Pre-operational inspection	Green finding and associated NCV	10 CFR Part 50, Appendix B, Criterion III, “Design Control.” The NRC identified that the licensee failed to establish measures to assure applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of February 17, 2015, the licensee failed to provide instructions in procedures to construct the spent fuel dry cask loading stack-up in the configuration that had been analyzed for in the stack-up seismic design basis calculation. In addition, as of October 10, 2016, the licensee failed to provide instructions in revised procedures to construct the stack-up without certain gaps as specified in stack-up seismic design basis document.	ML17045A709	*
84	Palisades	72-0007	Pre-operational inspection	SL IV NCV	10 CFR 72.212 (b)(6), "Conditions of a general license issued under 72.210." The failure of the licensee to adequately determine whether the reactor site parameters, including the analyses of tornado missiles, are enveloped by the cask design bases.	ML17045A709	*
85	Palisades	72-0007	Initial Loading	SL IV NCV	10 CFR 72.146, "Design control." The NRC identified that the licensee failed to correctly translate the results of the fire and explosion hazards analyses performed, as required by 10 CFR 72.212 (b)(6), into appropriate specifications, drawings, procedures and instructions. Specifically, neither procedure	ML17045A709	*

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					FHS-M-41E, Revision 0, "HI-STORM FW Dry Fuel Loading Operations - HI-STORM Site Transportation," nor procedure EN-DC-161, Revision 15, "Control of Combustibles" instituted adequate combustible control measures for the ISFSI storage pad, in accordance with the results from the fire hazard analysis in calculation EA-EC42425-22, Revision 0, and the explosion hazard analysis in calculation EA-EC42425-07, Revision 0.		
86	Palisades	72-0007	Initial Loading	SL IV NCV	10 CFR 72.212(b)(5), “Conditions of general license issued under §72.210.” It was discovered that certain fuel assemblies loaded into a spent fuel cask contained solid stainless-steel rods that were not considered in the radiological evaluations as required to demonstrate that the criteria specified in 10 CFR 72.104 were met.	ML17045A709	*
87	Perry	72-0069	Pre-operational inspection	Green finding and associated NCV	10 CFR 50, Appendix B, Criterion III, “Design Control.” The inspectors identified that the licensee failed to perform an adequate evaluation of crane support structure elements, which included bridge crane rail, bridge crane rail clips, bridge crane rail clip studs, leveling plate and leveling plate anchors. Specifically, for evaluation of these structural elements, the licensee failed to demonstrate Seismic Category I compliance in accordance with their design and licensing basis and failed to evaluate the structural elements for resulting reaction forces from the Fuel Handling Building crane.	ML12037A044	*

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88	Perry	72-0069	ISFSI Pad Construction	SL IV NCV	10 CFR 72.212 (b)(2)(i), "Conditions of a general license issued under 72.210." The inspectors identified that the licensee failed to incorporate the American Concrete Institute (ACI) code requirements and American Society of Civil Engineer's (ASCE) standards into the design basis of the ISFSI pad.	ML11215A187	*
89	Perry	72-0069	Operation of an ISFSI at Operating Plant	SL IV NCV	10 CFR Part 72.150, "Instructions, procedures, and drawings." The inspectors identified that the licensee failed to follow procedures important to safety during dry cask operations. Specifically, the licensee failed to ensure that liquid penetrant was applied to an entire weld being tested and failed to perform an RP survey and subsequent inspection for extent of damage to the FHB crane following a trip.	ML15044A152	*
90	Point Beach	72-0005	Operation of an ISFSI at Operating Plant	SL IV NCV	10 CFR 72.48(c)(1), ”Changes, tests, and experiments.” The licensee failed to obtain a Certificate of Compliance (CoC) amendment pursuant to 10 CFR 72.244 for changes made in the spent fuel storage cask operating procedures during the 2004 loading campaign as described in the Final Safety Analysis Report (FSAR) (as updated). These changes in the procedures constituted a change in the terms, conditions, or specifications incorporated in the CoC.	ML080450234	*

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91	Point Beach	72-0005	Operation of an ISFSI at Operating Plant	SL IV NCV	10 CFR 72.146, "Design control." The inspectors identified that the licensee failed to perform adequate evaluations to ensure compliance with 10 CFR 72.122(b)(2)(i) and 10 CFR 72.212(b)(6). Specifically, the inspectors identified that the licensee failed to evaluate that the reactor site parameters, including analyses of earthquakes, were enveloped by the transfer cask design basis.	ML12312A294	*
92	Point Beach	72-0005	Operation of an ISFSI at Operating Plant	Green finding and associated NCV	10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." The inspectors identified that the licensee failed to have adequate procedures in place to ensure that heavy loads were operated safely within the primary auxiliary building (PAB). Specifically, the inspectors determined that the licensee failed to incorporate minimum crane operating temperature limits into procedures to avoid brittle fracture of structural components below the nil-ductility transition temperature.	ML12312A294	*
93	Point Beach	72-0005	Operation of an ISFSI at Operating Plant	SL IV NCV	10 CFR 72.150," Instructions, procedures, and drawings." The inspectors identified that the licensee failed to follow point beach facility (PBF) procedure PBF-5101. Specifically, the licensee was utilizing PBF-5101 labeled for DSC-25 during the loading of DSC-24. This resulted in three fuel assemblies being incorrectly loaded into DSC-24.	ML16300A397	*

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94	Zion	72-1037	Initial Loading	SL IV NCV	10 CFR 72.150, “Instructions, procedures, and drawings.” The inspectors identified that the licensee failed to follow procedures for activities affecting quality. Specifically, on July 27, 2014, the licensee failed to follow procedure ZS-FT-402, Revision 15 to ensure control and monitoring of hydrogen concentrations during the performance of welding on a TSC.	ML14316A214	*
95	Zion	72-1037	Operation of an ISFSI at Operating Plant	SL IV NCV	NAC MAGNASTOR CoC 1031, Amendment 3, TS 5.2, "TSC Loading, Unloading, and Preparation Program." On March 5, 2015, through the inspection period, the licensee failed to establish and maintain a program for unloading fuel and components from the TSC when the spent fuel pool was no longer able to store fuel.	ML16047A092	*