UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 12, 2017

MEMORANDUM TO: Jeffrey J. Rikhoff, Acting Chief
Environmental Review and Project Management Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

FROM: Kevin Folk, Physical Scientist ***/RA/***
Environmental Review and Project
Management Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

SUBJECT: THE U.S. NUCLEAR REGULATORY COMMISSION STAFF EVALUATION OF THE FINAL RULE FOR CONTINUED STORAGE OF SPENT NUCLEAR FUEL FOR THE LICENSE RENEWAL ENVIRONMENTAL REVIEW FOR SOUTH TEXAS PROJECT, UNITS 1 AND 2.

This memorandum provides the U.S. Nuclear Regulatory Commission (NRC) staff's evaluation of the revised Title 10 of the *Code of Federal Regulations* (CFR) 51.23 and supporting generic environmental impact statement, NUREG-2157, "Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel: Final Report," dated September 2014 as it relates to the license renewal environmental review for South Texas Project, Units 1 and 2 (STP). The enclosure to this memorandum gives a brief overview of the NRC's environmental license renewal regulations, the remand of 10 CFR 51.23, the assumptions in the final Supplemental Environmental Impact Statement (FSEIS) for STP license renewal, and the substance and effect of the revised 10 CFR 51.23 and NUREG-2157. The enclosure then analyzes whether the revised rule and NUREG-2157 constitute new and significant information. Finally, the enclosure concludes that the revised rule and NUREG-2157 do not present a "seriously different picture" of the environmental impacts of the proposed action (license renewal) as compared to the discussion presented in the November 2013 STP FSEIS.

Docket Nos. 50-498 and 50-499

Enclosure:
As Stated

cc w/encl: Listserv

CONTACT: Tam Tran, NRR/DLR/RERP
301-415-8517

SUBJECT: THE U.S. NUCLEAR REGULATORY COMMISSION STAFF EVALUATION OF THE FINAL RULE FOR CONTINUED STORAGE OF SPENT NUCLEAR FUEL FOR THE LICENSE RENEWAL ENVIRONMENTAL REVIEW FOR SOUTH TEXAS PROJECT, UNITS 1 AND 2

DISTRIBUTION:

HARD COPY:
DLR RF

E-MAIL:
PUBLIC
RidsNrrDlr Resource
RidsNrrDlrRpb1 Resource
RidsNrrDlrRpb2 Resource
RidsNrrDlrRerb Resource
RidsNrrDlrRsrg Resource
RidsOgcMailCenter Resource

ADAMS Accession No. ML15190A042 *Concurred via e-mail

OFFICE	PM:RERP:DLR	PM:RERP:DLR
NAME	TTran	KFolk
DATE	5/3/2017	5/12/17

OFFICIAL RECORD COPY

THE U.S. NUCLEAR REGULATORY COMMISSION

STAFF EVALUATION OF THE FINAL RULE FOR

CONTINUED STORAGE OF SPENT NUCLEAR FUEL[1]

FOR THE LICENSE RENEWAL ENVIRONMENTAL REVIEW FOR

SOUTH TEXAS PROJECT, UNITS 1 AND 2

Introduction and Summary

The purpose of this evaluation is to document the U.S. Nuclear Regulatory Commission (NRC) staff's evaluation of the revised Title 10 of the *Code of Federal Regulations* (CFR) 51.23 Continued Storage Rule and supporting Generic Environmental Impact Statement (GEIS), dated September 2014 (i.e., NUREG-2157) as it relates to the discussion of spent fuel in Chapter 6 of the South Texas Project, Units 1 and 2 (STP), final Supplemental Environmental Impact Statement (FSEIS)[2] for license renewal. This evaluation gives a brief overview of the NRC's environmental license renewal regulations, the *vacatur* and remand of 10 CFR 51.23, the assumptions in the STP FSEIS for license renewal, and the substance and effect of the revised 10 CFR 51.23 and NUREG-2157. The evaluation then analyzes whether the revised 10 CFR 51.23 rule and NUREG-2157 constitute new and significant information that would require a supplement to the STP FSEIS. The evaluation concludes that the revised 10 CFR 51.23 rule and NUREG-2157 do not present a "seriously different picture" of the environmental impacts of the proposed action (i.e., license renewal) as compared to the impacts analysis presented in the STP FSEIS. Therefore, a supplement to the November 2013 STP FSEIS is not required.

NRC's Environmental Rules for Nuclear Power Plant License Renewal

The NRC's findings regarding the environmental impacts associated with the renewal of a nuclear power plant operating license are contained in Table B-1, "Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants." The table is located in Appendix B to Subpart A of 10 CFR Part 51, "Environmental Effect of Renewing the Operating License of a Nuclear Power Plant"[3] (Table B-1). In 1996, as part of the 10 CFR Part 51 license renewal rulemaking, the NRC determined that offsite radiological impacts of spent nuclear fuel and high-level waste disposal would be a Category 1 (i.e., generic) issue with no impact level assigned (61 FR 28467, 28495; June 5, 1996). The NRC analyzed the U.S. Environmental Protection Agency (EPA) generic repository standards and dose limits in existence at the time and

---

[1] 79 FR 56238-56263. U.S. Nuclear Regulatory Commission. "Continued Storage of Spent Nuclear Fuel." Federal Register 79 (182):56238–56263. September 19, 2014.

[2] U.S. Nuclear Regulatory Commission. 2013. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 48: Regarding South Texas Project, Units 1 and 2, Final Report*. NUREG-1437, Supplement 48. Office of Nuclear Reactor Regulation, Washington, D.C. November, 2013. Agencywide Documents Access & Management System (ADAMS) Accession No. ML13322A890.

[3] The Commission issued Table B-1 in June 1996 (61 FR 28467; June 5, 1996). The Commission issued an additional rule in December 1996 that made minor clarifying changes to, and added language inadvertently omitted from, Table B-1 (61 FR 66537; December 18, 1996). The NRC revised Table B-1 and other regulations in 10 CFR Part 51, relating to the NRC's environmental review of a nuclear power plant's license renewal application in a 2013 rulemaking (78 FR 37282; June 20, 2013).

concluded that offsite radiological impacts warranted a Category 1 determination (61 FR 28467, 28478; June 5, 1996). In a 2009 proposed rule, the NRC stated its intention to reaffirm that determination (74 FR 38117, 38127; July 31, 2009).

As discussed in Chapter 6 of the STP FSEIS, in *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012), the court vacated the Commission's Waste Confidence Decision and Rule (i.e., 10 CFR 51.23). In response to the court's *vacatur*, the Commission developed a revised rule and associated "Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel" (NUREG-2157, ADAMS Accession Nos. ML14196A105 and ML14196A107). Before the issuance of the revised rule and associated GEIS, the NRC issued the 2013 final license renewal rule, which amended Table B-1—along with other 10 CFR part 51 regulations—and stated that upon finalization of the revised Waste Confidence rule and accompanying technical analyses,[4] the NRC would make any necessary conforming amendments to Table B-1 (78 FR 37282, 37293; June 20, 2013).

The STP FSEIS

On August 26, 2014 (SRM-SECY-14-0072, ML14237A092), the Commission approved a revised rule at 10 CFR 51.23 and associated "Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel" (NUREG-2157, ADAMS Accession Nos. ML14196A105 and ML14196A107). Subsequently, on September 19, 2014, the NRC published the revised rule (79 FR 56238) in the *Federal Register* along with NUREG-2157 (79 FR 56263). The revised rule or Continued Storage Rule adopts the generic impact determinations made in NUREG-2157 and codifies the NRC's generic determinations regarding the environmental impacts of continued storage of spent nuclear fuel beyond a reactor's operating license (i.e., those impacts that could occur as a result of the storage of spent nuclear fuel at at-reactor or away-from-reactor sites after a reactor's licensed life for operation and until a permanent repository becomes available). As directed by 10 CFR 51.23(b), the impacts assessed in NUREG-2157 regarding continued storage were deemed incorporated by rule into the STP license renewal FSEIS. The Continued Storage Rule[5] and accompanying technical analyses were not finalized before the STP FSEIS was being prepared for publication. Therefore, the STP FSEIS further indicated that if the results of the Waste Confidence rule [Continued Storage Rule] and supporting EIS identify information that requires a supplement to the FSEIS, the NRC staff will perform any appropriate additional National Environmental Policy Act (NEPA) review for those issues before the NRC makes a final licensing decision.

In the revised Continued Storage Rule (10 CFR 51.23), the NRC made conforming changes to the two environmental issues in Table B-1 that were impacted by the vacated Waste Confidence rule: "Onsite spent fuel" and "Offsite radiological impacts (spent fuel and high-level waste disposal)."[6] Although NUREG-2157 (the technical basis for revised 10 CFR 51.23) does not include high-level waste disposal in the analysis of impacts, it does address the technical feasibility of a repository in Appendix B of NUREG-2157 and concludes that a geologic

[4] At the time of the 2013 final license renewal rule, the Continued Storage Rule was referred to by its long-standing historical moniker, Waste Confidence.
[5] For the purposes of this paper, the Staff will generally refer to the Continued Storage Rule unless it is specifically referencing an earlier version of the rule.
[6] These two issues were renamed, ''Onsite storage of spent nuclear fuel'' and ''Offsite radiological impacts of spent nuclear fuel and high-level waste disposal,'' respectively, by the 2013 license renewal rule. See "Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 78 FR 37282–37324 (June 20, 2013).

repository for spent fuel is technically feasible and the same analysis applies to the feasibility of geologic disposal for high-level waste.

The Commission revised the Table B-1 finding for "Onsite storage of spent nuclear fuel" to add the phrase "during the license renewal term" to make clear that the SMALL impact is for the license renewal term only. Some minor clarifying changes were also made to the paragraph. The first paragraph of the column entry now reads, "During the license renewal term, SMALL. The expected increase in the volume of spent nuclear fuel from an additional 20 years of operation can be safely accommodated onsite during the license renewal term with small environmental impacts through dry or pool storage at all plants." In addition, a new paragraph is added to address the impacts of onsite storage of spent fuel during the continued storage period. The second paragraph of the column entry reads, "For the period after the licensed life for reactor operations, the impacts of onsite storage of spent nuclear fuel during the continued storage period are discussed in NUREG-2157 and as stated in § 51.23(b), shall be deemed incorporated into this issue." The changes reflect that this issue covers the environmental impacts associated with the storage of spent nuclear fuel during the license renewal term as well as the period after the licensed life for reactor operations.

In addition, the Table B-1 entry for "Offsite radiological impacts of spent nuclear fuel and high-level waste disposal" was revised to reclassify the impact determination as a Category 1 issue with no impact level assigned. The finding column entry for this issue includes reference to EPA's radiation protection standards for the high-level waste and spent nuclear fuel disposal component of the fuel cycle. Although the status of a repository, including a repository at Yucca Mountain, is uncertain and outside the scope of the generic environmental analysis conducted to support the revised 10 CFR 51.23, the NRC believes that the current radiation standards for Yucca Mountain are protective of public health and safety and the environment.

The changes to these two issues finalize the Table B-1 entries that the NRC had intended to promulgate in its 2013 license renewal rulemaking, but was unable to because the 2010 Waste Confidence rule had been vacated.

NUREG-2157 concludes that deep geologic disposal remains technically feasible, while the bases for the specific conclusions in Table B-1 are found elsewhere (e.g., the 1996 rule that issued Table B-1 and the 1996 license renewal GEIS, which provided the technical basis for that rulemaking, as reaffirmed by the 2013 rulemaking and final license renewal GEIS). Based on the revised Continued Storage Rule (10 CFR 51.23), these two issues were revised accordingly in Table B-1.

<u>CLI-14-08: Holding that Revised 10 CFR 51.23 and NUREG-2157 Satisfy NRC's NEPA Obligations for Continued Storage and Directing Staff to Account for Environmental Impacts In NUREG-2157</u>

In CLI-14-08 (ADAMS Accession No. ML14238A242), the Commission held that the revised 10 CFR 51.23 and associated NUREG-2157 cure the deficiencies identified by the court in *New York* and stated that the rule satisfies the NRC's NEPA obligations with respect to continued storage for initial, renewed, and amended licenses for reactors.

Therefore, the STP FSEIS, which by rule incorporates the impact determinations in NUREG-2157 regarding continued storage, contains an analysis for the generic issues of "Onsite storage of spent nuclear fuel" and "Offsite radiological impacts of spent nuclear fuel and high-level waste disposal" that satisfies NEPA. As the Commission noted in CLI-14-08, the NRC staff must

account for these environmental impacts before finalizing its licensing decision in this proceeding. To account for these impact determinations, the staff analyzed whether the revised rule at 10 CFR 51.23 and the associated NUREG-2157 present new and significant information such that a supplement to the STP FSEIS is required.

Requirements for Supplementing an EIS

As required by 10 CFR 51.92(a), the staff will prepare a supplement to the STP FSEIS if the proposed action (i.e., issuance of renewed operating licenses) has not been taken and:

(1) there are substantial changes in the proposed action that are relevant to environmental concerns; or
(2) there are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

The applicant for the STP, Units 1 and 2, renewed licenses has not proposed any changes to the proposed action in this case. Therefore, a supplement is not required under 10 CFR 51.92(a)(1).

Because the Commission issued a revised 10 CFR 51.23 and associated NUREG-2157, and the impact determinations in NUREG-2157 regarding continued storage shall be deemed incorporated into a SEIS for renewed licenses, the staff analyzed whether the revised 10 CFR 51.23 and NUREG-2157 present new and significant information such that a supplement to the STP FSEIS is required under 10 CFR 51.92(a)(2). To merit a supplement, information must be both new and significant and it must bear on the proposed action or its impacts. The Commission has stated that new information would be considered significant if it presents "a seriously different picture of the environmental impact of the proposed project from what was previously envisioned." *Union Electric Co*. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 167-68 (2011); *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999) (*citing Marsh v. Oregon Natural Resources* Council, 490 U.S. 360, 373 (1989); *Sierra Club v. Froehlke*, 816 F.2d 205, 210 (5th Cir. 1987)). In determining whether new information meets this "seriously different picture" standard, the NRC staff looks to, among other things: previous Commission decisions on claimed new and significant information, previous environmental analyses done for the proposed action at issue, and *Marsh*, which provides that agency decisions regarding the need to supplement an EIS based on new and significant information are subject to the "rule of reason."

In other proceedings, the Commission explained that if it found any new information that presents a significant new environmental impact that should be addressed in site-specific environmental analyses, the Commission would supplement or otherwise incorporate the information into the environmental analyses as warranted. See CLI-12-15 (ADAMS Accession Number ML12159A152). In doing so, the Commission will have provided access to the relevant information and the agency decision makers will have considered that information before a final decision on the matter is reached. *Hydro Resources, Inc*. (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999).

Analysis of Whether Revised 10 CFR 51.23 and NUREG-2157 Are New and Significant Information

The analysis below examines whether NUREG-2157 and the revised 10 CFR 51.23 constitute new and significant information such that a supplement to the November 2013 STP FSEIS is

required. The NRC staff concludes that the revised rule and NUREG-2157 do not present a "seriously different picture" of the environmental impacts of the proposed action (i.e., license renewal) as compared to the impacts analysis presented in the STP FSEIS; therefore, no supplement to the STP FSEIS is required.

By virtue of revised 10 CFR 51.23, the STP FSEIS incorporated the impact determinations in NUREG-2157 regarding continued storage such that there is a complete analysis of the environmental impacts associated with spent fuel storage beyond the licensed life for reactor operations. However, as discussed above, the Continued Storage Rule and accompanying technical analyses were not finalized before the STP FSEIS was being prepared for publication. Therefore, the STP SEIS further indicated that if the results of the Waste Confidence rule [Continued Storage Rule] and supporting EIS identify information that requires a supplement to the FSEIS, the NRC staff will perform any appropriate additional NEPA review for those issues before the NRC makes a final licensing decision. The NRC staff has determined that the findings in NUREG-2157 do not paint a seriously different picture from what was previously presented and analyzed in the STP FSEIS for the license renewal term. As discussed above, the public extensively participated in the 10 CFR 51.23 rulemaking process following the court's remand in *New York*.

The NRC staff also considered whether the revised rule and NUREG-2157 altered the NRC staff's recommendation in the STP FSEIS that the adverse environmental impacts of license renewal for STP are not great enough to deny the option of license renewal for energy planning decision-makers. After analyzing the impact determinations in NUREG-2157, discussed below, the staff concluded that they did not alter the NRC staff's license renewal recommendation.

At-Reactor Storage

The analysis in NUREG-2157 concludes that the potential impacts of at-reactor storage during the short-term timeframe (i.e., the first 60 years after the end of licensed life for operations of the reactor) would be SMALL (see Section 4.20 of NUREG-2157). Further, the analysis in NUREG-2157 states that disposal of the spent fuel by the end of the short-term timeframe is the most likely outcome (see Section 1.2 of NUREG-2157). Thus, the potential impacts of at-reactor continued storage during the short-term timeframe are consistent with the evaluation in the STP FSEIS regarding the impacts of onsite storage of spent fuel during the license renewal term.

However, the analysis in NUREG-2157 also evaluated the potential impacts of continued storage if the fuel is not disposed of by the end of the short-term timeframe. The analysis in NUREG-2157 determined that the impacts to historic and cultural resources from at-reactor storage during the long-term timeframe (i.e., the 100-year period after the short-term timeframe) and the indefinite timeframe (i.e., the period after the long-term timeframe) are dependent on factors that are unpredictable this far in advance and therefore concluded those impacts would be SMALL to LARGE (see Section 4.12 of NUREG-2157). Among other things, as discussed in NUREG-2157, the NRC cannot accurately determine at this time what resources may be present or discovered at a continued storage site a century or more in the future and whether those resources will be historically or culturally significant to future generations. Additionally, impacts greater than SMALL could occur if the activities to replace an independent spent fuel storage installation (ISFSI) and the dry transfer system (DTS) adversely affect cultural or historic resources and the effects cannot be mitigated. As discussed in NUREG-2157, given the minimal size of an ISFSI and DTS, and the large land areas at nuclear power plant sites, licensees should be able to locate these facilities away from historic and cultural resources.

Potential adverse effects on historic properties or impacts on historic and cultural resources could also be minimized through development of agreements, license conditions, and implementation of the licensee's historic and cultural resource management plans and procedures to protect known historic and cultural resources and address inadvertent discoveries during construction and replacement of these facilities. However, it may not be possible to avoid adverse effects on historic properties under the National Historic Preservation Act of 1966 (NHPA), as amended or impacts on historic and cultural resources under NEPA and, therefore, the analysis in NUREG-2157 concluded that impacts would be SMALL to LARGE (see Section 4.12.2 of NUREG-2157).

The analysis in NUREG-2157 also concludes that the impacts of nonradioactive waste in the indefinite timeframe would be SMALL to MODERATE, with the higher impacts potentially occurring if the waste from repeated replacement of the ISFSI and DTS exceeds local landfill capacity (see Section 4.15 of NUREG-2157). Although the NRC concluded that nonradioactive waste disposal would not be destabilizing (or LARGE), the range reflects uncertainty regarding whether the volume of nonradioactive waste from continued storage would contribute to noticeable waste management impacts over the indefinite timeframe when considered in the context of the overall local volume of nonradioactive waste.

As previously discussed, the NRC found in NUREG-2157 that disposal of the spent fuel is most likely to occur by the end of the short-term timeframe. Therefore, disposal during the long-term timeframe is less likely, and the scenario depicted in the indefinite timeframe—continuing to store spent nuclear fuel indefinitely—is unlikely. As a result, the most likely impacts of the continued storage of spent fuel are those considered in the short-term timeframe. In the unlikely event that fuel remains on site into the long-term and indefinite timeframes, the associated impact ranges in NUREG-2157 reflect the accordingly greater uncertainties regarding the potential impacts over these very long periods of time. Taking into account the impacts that the NRC considers most likely, which are SMALL; the greater uncertainty reflected in the ranges in the long-term and indefinite timeframes compared to the greater certainty in the SMALL findings; and the relative likelihood of the timeframes, the staff finds that the impact determinations for at-reactor storage presented in NUREG-2157 do not present a seriously different picture of the environmental impacts compared to the staff's analysis in Section 6.1, The Uranium Fuel Cycle, of the STP FSEIS regarding the impacts from spent fuel storage during the license renewal term.

Away-From-Reactor Storage

In NUREG-2157, the NRC concluded that a range of potential impacts could occur for some resource areas if the spent fuel from multiple reactors is shipped to a large (roughly 40,000 Metric Tons Uranium) away-from-reactor ISFSI (see Section 5.20 of NUREG-2157). The ranges for some resources are driven by the uncertainty regarding the location of such a facility and the local resources that would be affected.

For away-from-reactor storage, the unavoidable adverse environmental impacts for most resource areas is SMALL across all timeframes, except for air quality, terrestrial resources, aesthetics, waste management, and transportation where the impacts are SMALL to MODERATE. Socioeconomic impacts range from SMALL (adverse) to LARGE (beneficial) and historic and cultural resource impacts could be SMALL to LARGE across all timeframes. The potential MODERATE impacts on air quality, terrestrial wildlife, and transportation are based on potential construction-related fugitive dust emissions, terrestrial wildlife direct and indirect mortalities, terrestrial habitat loss, and temporary construction traffic impacts. The potential

MODERATE impacts on aesthetics and waste management are based on noticeable changes to the viewshed from constructing a new away-from-reactor ISFSI, and the volume of nonhazardous solid waste generated by assumed facility ISFSI and DTS replacement activities for the indefinite timeframe, respectively. The potential LARGE beneficial impacts on socioeconomics are due to local economic tax revenue increases from an away-from-reactor ISFSI.

The potential impacts to historic and cultural resources during the short-term storage timeframe would range from SMALL to LARGE. The magnitude of adverse effects on historic properties and impacts on historic and cultural resources largely depends on where facilities are sited, what resources are present, the extent of proposed land disturbance, whether the area has been previously surveyed to identify historic and cultural resources, and if the licensee has management plans and procedures that are protective of historic and cultural resources. Even a small amount of ground disturbance (e.g., clearing and grading) could affect a small but significant resource. In most instances, placement of storage facilities on the site can be adjusted to minimize or avoid impacts on any historic and cultural resources in the area. However, the NRC recognizes that this may not always be possible. The NRC's site-specific environmental review and compliance with the NHPA process could identify historic properties, identify adverse effects, and potentially resolve adverse effects on historic properties and impacts on other historic and cultural resources. Under the NHPA, mitigation does not eliminate a finding of adverse effect on historic properties. The potential impacts to historic and cultural resources during the long-term and indefinite storage timeframes would also range from SMALL to LARGE. This range takes into consideration routine maintenance and monitoring (i.e., no ground-disturbing activities), the absence or avoidance of historic and cultural resources, and potential ground-disturbing activities that could affect historic and cultural resources. The analysis also considers uncertainties inherent in analyzing this resource area over long timeframes. These uncertainties include any future discovery of previously unknown historic and cultural resources; resources that gain significance within the vicinity and the viewshed (e.g., nomination of a historic district) due to improvements in knowledge, technology, and excavation techniques and changes associated with predicting resources that future generations will consider significant. If construction of a DTS and replacement of the ISFSI and DTS occurs in an area with no historic or cultural resource present or construction occurs in a previously disturbed area that allows avoidance of historic and cultural resources then impacts would be SMALL. By contrast, a MODERATE or LARGE impact could result if historic and cultural resources are present at a site and, because they cannot be avoided, are impacted by ground-disturbing activities during the long-term and indefinite timeframes.

Impacts on Federally listed species, designated critical habitat, and essential fish habitat would be based on site-specific conditions and determined as part of consultations required by the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act.

Continued storage of spent nuclear fuel at an away-from-reactor ISFSI is not expected to cause disproportionately high and adverse human health and environmental effects on minority and low-income populations. As indicated in the Commission's policy statement on environmental justice, should the NRC receive an application for a proposed away-from-reactor ISFSI, a site-specific NEPA analysis would be conducted, and this analysis would include consideration of environmental justice impacts. Thus, the staff finds that the impact determinations for away-from-reactor storage presented in NUREG-2157 do not present a seriously different picture of

the environmental impacts compared to the NRC staff's analysis in Section 6.1, The Uranium Fuel Cycle, of the STP FSEIS regarding the impacts from spent fuel storage during the license renewal term.

Cumulative Impacts

NUREG-2157 examines the incremental impact of continued storage on each resource area analyzed in NUREG-2157 in combination with other past, present, and reasonably foreseeable future actions. NUREG-2157 indicates ranges of potential cumulative impacts for multiple resource areas (see Section 6.5 of NUREG-2157). However, these ranges are primarily driven by impacts from activities other than the continued storage of spent fuel at the reactor site; the impacts from these other activities would occur regardless of whether spent nuclear fuel is stored during the continued storage period. In the short-term timeframe, which is the most likely timeframe for the disposal of the fuel, the potential impacts of continued storage for at-reactor storage are SMALL and would, therefore, not be a significant contributor to the cumulative impacts. In the longer timeframes for at-reactor storage, or in the less likely case of away-from-reactor storage, some of the impacts from the storage of spent nuclear fuel could be greater than SMALL. As noted in NUREG-2157, other Federal and non-Federal activities occurring during the longer timeframes include uncertainties as well. It is primarily these uncertainties (i.e., those associated with activities other than continued storage) that contribute to the ranges of potential cumulative impacts discussed throughout Chapter 6 of NUREG-2157 and summarized in Table 6-4 of NUREG-2157. Because, as stated above, the impacts from these other activities would occur regardless of whether continued storage occurs, the overall cumulative impact conclusions in NUREG-2157 would still be the stated ranges regardless of whether there are impacts of continued storage from any individual licensing action.

Taking into account the impacts that the NRC considers most likely, which are SMALL; the uncertainty reflected by the ranges in some impacts; and the relative likelihood of the timeframes, the staff finds that NUREG-2157 does not present a seriously different picture of the environmental impacts compared to the NRC staff's analysis regarding the cumulative impacts of relicensing STP from radiological wastes from the uranium fuel cycle in Chapter 6 of the STP FSEIS (which includes the impacts associated with spent nuclear fuel storage).

Overall Conclusion

To determine whether the revised 10 CFR 51.23 and incorporating the impact determinations in NUREG-2157 regarding continued storage require a supplement to the November 2013 STP FSEIS, the NRC staff analyzed the conclusions in NUREG-2157 to determine whether they present a seriously different picture of the environmental impacts that were discussed in the STP SEIS.

The Commission conducted a rulemaking, which involved extensive public participation, and has now adopted a revised rule and made generic determinations with respect to those issues, which are discussed in NUREG-2157 and incorporated, by rule, into the STP FSEIS. As previously stated, the Commission held in CLI-14-08 that the revised 10 CFR 51.23 and associated NUREG-2157 satisfy the NRC's NEPA obligations with respect to continued storage as it pertains to the issues, "Onsite storage of spent nuclear fuel" and "Offsite radiological impacts of spent nuclear fuel and high level waste disposal" for renewed licenses for STP. Therefore, the STP FSEIS incorporates the generic impact determination codified in the revised rule and supporting NUREG-2157 and does not need to be supplemented.

The revised rule and NUREG-2157 also do not change the NRC staff's determination in the STP FSEIS that the adverse environmental impacts of license renewal for STP are not great enough to deny the option of license renewal for energy planning decision-makers. The analysis in NUREG-2157 supports the conclusion that the most likely impacts of continued storage are those discussed for at-reactor storage. For continued at-reactor storage, impacts in the short-term timeframe would be SMALL. Over the longer timeframes, impacts to certain resource areas would be a range (i.e., for historic and cultural resources during both the long-term and indefinite timeframes the range is SMALL to LARGE and for nonradioactive waste during the indefinite timeframe the range is SMALL to MODERATE). In NUREG-2157, the NRC stated that disposal of the spent fuel before the end of the short-term timeframe is most likely. There are inherent uncertainties in determining impacts for the long-term and indefinite timeframes, and, with respect to some resource areas, those uncertainties could result in impacts that, although less likely, could be larger than those that are to be expected at most sites and have therefore been presented as ranges rather than as a single impact level. Those uncertainties exist, however, regardless of whether the impacts are analyzed generically or site-specifically. As a result, these impact ranges provide correspondingly more limited insights to the decision-maker in the overall picture of the environmental impacts from the proposed action (i.e., license renewal).

The NRC staff concludes that when weighed against the array of other fuel cycle impacts presented in the STP FSEIS, and the more-likely impacts of continued storage during the short-term timeframe in NUREG-2157, which are SMALL, the uncertainties associated with the impact ranges for the long-term and indefinite timeframes do not present a seriously different picture of the direct, indirect, and cumulative environmental impacts compared to the NRC staff's analysis of the impacts from issuance of renewed operating licenses for STP attributable to the uranium fuel cycle and waste management (which includes the impacts associated with spent fuel storage). Additionally, for the reasons discussed above, continued at-reactor storage is not expected to contribute noticeably to cumulative impacts. The revised rule and the impact determinations contained in NUREG-2157 also do not alter the NRC staff's recommendation in the STP FSEIS that the adverse environmental impacts of license renewal for STP are not great enough to deny the option of license renewal for energy planning decisionmakers.