

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 4, 2011

Mr. Mark B. Bezilla Site Vice President FirstEnergy Nuclear Operating Company Mail Stop A-PY-A290 P.O. Box 97, 10 Center Road Perry, OH 44081-0097

SUBJECT:

PERRY NUCLEAR POWER PLANT, UNIT NO. 1 - ISSUANCE OF

AMENDMENT RE: ADOPTION OF TSTF - 514, REVISION 3, "REVISE BWR

OPERABILITY REQUIREMENTS AND ACTIONS FOR RCS LEAKAGE

INSTRUMENTATION" (TAC NO. ME6034)

Dear Mr. Bezilla:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 159 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit No. 1 (PNPP). This amendment revises the Technical Specifications (TS) in response to your application dated April 12, 2011.

This amendment revises PNPP's TS's by defining a new time limit for restoring inoperable reactor coolant system (RCS) leakage detection instrumentation to operable status and establishing alternate methods of monitoring RCS leakage when one or more required monitors are inoperable.

The application is consistent with the guidance contained in NRC-approved Technical Specifications Task Force Change Traveler 514 (TSTF-514). TSTF-514 was made available by the NRC on December 17, 2010 (75 FR 79048), as part of the consolidated line item improvement process.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Michael Mahoney, Project Manager Plant Licensing Branch III-2

Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures:

1. Amendment No. 159 to NPF-58

2. Safety Evaluation

cc w/encls: Distribution via Listserv



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

FIRSTENERGY NUCLEAR OPERATING COMPANY

FIRSTENERGY NUCLEAR GENERATION CORP.

OHIO EDISON COMPANY

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 159 License No. NPF-58

- 1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for license filed by FirstEnergy Nuclear Operating Company, et al., (the licensee, FENOC) dated April 12, 2011, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
- 2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 159 are hereby incorporated into this license. FENOC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of its issuance and shall be implemented within 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Jacob I. Zimmerman, Chief Plant Licensing Branch III-2

Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical

Specifications and Facility Operating License

Date of Issuance: October 4, 2011

ATTACHMENT TO LICENSE AMENDMENT NO. 159

FACILITY OPERATING LICENSE NO. NPF-58

DOCKET NO. 50-440

Replace the following pages of the Facility Operating License and Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	<u>Insert</u>		
<u>License NPF-58</u> Page 4	<u>License NPF-58</u> Page 4		
<u>TSs</u> 3.4-17	<u>TSs</u> 3.4-17 3.417a		

renewal. Such sale and leaseback transactions are subject to the representations and conditions set forth in the above mentioned application of January 23, 1987, as supplemented on March 3, 1987, as well as the letter of the Director of the Office of Nuclear Reactor Regulation dated March 16, 1987, consenting to such transactions. Specifically, a lessor and anyone else who may acquire an interest under these transactions are prohibited from exercising directly or indirectly any control over the licenses of PNPP Unit 1. For purposes of this condition the limitations of 10 CFR 50.81, as now in effect and as may be subsequently amended, are fully applicable to the lessor and any successor in interest to that lessor as long as the license for PNPP Unit 1 remains in effect; these financial transactions shall have no effect on the license for the Perry Nuclear facility throughout the term of the license.

- (b) Further, the licensees are also required to notify the NRC in writing prior to any change in: (i) the terms or conditions of any lease agreements executed as part of these transactions; (ii) the PNPP Operating Agreement; (iii) the existing property insurance coverage for PNPP Unit 1; and (iv) any action by a lessor or others that may have an adverse effect on the safe operation of the facility.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now and hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

FENOC is authorized to operate the facility at reactor core power levels not in excess of 3758 megawatts thermal (100% power) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 159, are hereby incorporated into the license. FENOC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

a. FirstEnergy Nuclear Generation Corp. and Ohio Edison Company

ACTIONS (continued)

ACTIONS (continued)			
CONDITION	REQUIRED ACTION		COMPLETION TIME
C. Upper drywell air cooler condensate flow rate monitoring system inoperable.	Not applicable when the required drywell atmospheric monitoring system is inoperable. C.1 Perform SR 3.4.7.1.		Once per 8 hours
Only applicable when the drywell atmospheric gaseous monitoring system is the only OPERABLE monitor.	D.1 <u>AND</u>	Analyze grab samples of the drywell atmosphere.	Once per 12 hours
D. Drywell floor drain sump monitoring system inoperable.	D.2	Monitor RCS leakage by administrative means.	Once per 12 hours
AND Upper drywell air cooler condensate flow rate monitoring system inoperable.	D.3.1 <u>OR</u>	Restore drywell floor drain sump monitoring system to OPERABLE status.	7 days
1	D.3.2	Restore upper drywell air cooler condensate flow rate monitoring system to OPERABLE status.	7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E.Required drywell atmospheric monitoring system inoperable.	E.1 Restore required drywell atmospheric monitoring system to OPERABLE status.	30 days
AND Upper drywell air cooler condensate flow rate monitoring system inoperable.	OR E.2 Restore upper drywell air cooler condensate flow rate monitoring system to OPERABLE status.	30 days
F. Required Action and associated Completion Time of Condition A, B, C, D or E not met.	F.1 Be in MODE 3. AND F.2 Be in MODE 4.	12 hours 36 hours
G. All required leakage detection systems inoperable	G.1 Enter LCO 3.0.3.	Immediately



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO AMENDMENT NO. 159 TO FACILITY OPERATING LICENSE NO. NPF-58

FIRSTENERGY NUCLEAR OPERATING COMPANY

FIRSTENERGY NUCLEAR GENERATION CORP.

OHIO EDISON COMPANY

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter to the U.S. Nuclear Regulatory Commission (NRC, the Commission) dated April 12, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML111030640), FirstEnergy Nuclear Operating Company (FENOC, the licensee) requested changes to the Technical Specifications (TSs) for the Perry Nuclear Power Plant (PNPP), Unit No. 1. The proposed changes revise TS 3.4.7, "[Reactor Coolant System] RCS Leakage Detection Instrumentation," and the application includes TS Bases changes that summarize and clarify the purpose of the TS and the specified safety function of the leakage detection monitors.

The licensee requested to amend the PNPP TSs to define a new time limit for restoring inoperable RCS leakage detection instrumentation to operable status; establish alternate methods of monitoring RCS leakage when one or more required monitors are inoperable.

The application also makes TS Bases changes which reflect the proposed changes and more accurately reflect the contents of the facility design basis related to operability of the RCS leakage detection instrumentation.

This license amendment request is consistent with NRC-approved Revision 3 to Technical Specification Task Force (TSTF) Standard Technical Specification (STS) Change Traveler TSTF-514, "Revise BWR [boiling-water reactor] Operability Requirements and Actions for RCS Leakage Instrumentation" (ADAMS Accession No. ML103280389). The availability of this TS improvement was announced in the *Federal Register* on December 17, 2010 (75 FR 79048, ADAMS Accession No. ML102300733), as part of the consolidated line item improvement process.

2.0 REGULATORY EVALUATION

The NRC's regulatory requirements related to the content of the TS are contained in Title 10 of the Code of Federal Regulations (10 CFR), Section 50.36. Paragraph (c)(2)(i) of 10 CFR 50.36. states that limiting conditions for operation (LCOs) are the lowest functional capability or performance levels of equipment required for safe operation of the facility. Paragraph (c)(2)(ii) of 10 CFR 50.36 lists four criteria for determining whether particular items are required to be included in the TS LCOs. Criterion 1 applies to installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary (RCPB). As described in the Federal Register notice associated with this regulation (60 FR 36953, July 16, 1995), the scope of TS includes two general classes of technical matters: (1) those related to prevention of accidents, and (2) those related to mitigation of the consequences of accidents. Criterion 1 addresses systems and process variables that alert the operator to a situation when accident initiation is more likely, and supports the first of these two general classes of technical matters, which are included in TS. As specified in Paragraph (c)(2)(i) of 10 CFR 50.36, when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met.

The NRC's guidance for the format and content of BWR TSs can be found in NUREG-1434, Revision 3.0, "Standard Technical Specifications General Electric Plants, BWR/6," dated June 2004 (ADAMS Accession No. ML041910204). STS 3.4.7, "RCS Leakage Detection Instrumentation," in NUREG-1434 contains the guidance specific to the RCS leakage detection instrumentation for BWRs.

The STS TS Bases for STS 3.4.7 contained in NUREG-1434, Revision 3.0, provide background information, the applicable safety analyses, a description of the LCO, the applicability for the RCS leakage detection instrumentation TS, and describe the Actions and Surveillance Requirements.

The Perry TS Bases provide the purpose or reason for the TS, which are derived from the analyses and evaluation included in the safety analysis report, including RCS leakage detection instrumentation design assumptions and licensing basis for PNPP.

As stated in NRC Information Notice (IN) 2005-24, "Non conservatism in Leakage Detection Sensitivity," (ADAMS Accession No. ML051780073), the reactor coolant activity assumptions for primary containment/drywell atmosphere gaseous radioactivity monitors may be nonconservative. This means the monitors may not be able to detect a one gallon per minute (gpm) leak within one hour under all likely operating conditions.

The issue described in IN 2005-24 has raised questions regarding operability requirements for primary containment/drywell atmosphere gaseous radioactivity monitors. TSTF-514, Revision 3, revises the TS Bases to summarize the proposed TS changes and more accurately describe the contents of the facility design basis related to operability of the RCS leakage detection instrumentation. The TS Bases changes revise the specified safety function of the RCS leakage detection monitors to specify the required instrument sensitivity level. In addition, TSTF-514, Revision 3, includes a new TS Condition for RCS leakage detection instrumentation to establish

Required Actions for operation during conditions of reduced monitoring sensitivity because the gaseous radioactivity instrumentation is the only operable instrument

In 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 30, "Quality of Reactor Coolant Pressure Boundary," it requires means for detecting and, to the extent practical, identifying the location of the source of RCS leakage. Regulatory Guide (RG) 1.45, Revision 0, "Reactor Coolant Pressure Boundary [RCPB] Leakage Detection Systems," dated May 1973, describes acceptable methods of implementing the GDC 30 requirements with regard to the selection of leakage detection systems for the RCPB.

In RG 1.45, Revision 0, Regulatory Position C.2, it states that "Leakage to the primary reactor containment from unidentified sources should be collected and the flow rate monitored with an accuracy of one gallon per minute (gpm) or better."

In RG 1.45, Revision 0, Regulatory Position C.3, it states:

At least three separate detection methods should be employed and two of these methods should be (1) sump level and flow monitoring and (2) airborne particulate radioactivity monitoring. The third method may be selected from the following:

- a. monitoring of condensate flow rate from air coolers,
- b. monitoring of airborne gaseous radioactivity.

Humidity, temperature, or pressure monitoring of the containment atmosphere should be considered as alarms or indirect indication of leakage to the containment.

In RG 1.45, Revision 0, Regulatory Position C.5, it states, "The sensitivity and response time of each leakage detection system in Regulatory Position 3. above employed for unidentified leakage should be adequate to detect a leakage rate, or its equivalent, of one gpm in less than one hour." RG 1.45, Revision 0, further states, "In analyzing the sensitivity of leak detection systems using airborne particulate or gaseous radioactivity, a realistic primary coolant radioactivity concentration assumption should be used. The expected values used in the plant environmental report would be acceptable." The appropriate sensitivity of a plant's primary containment/drywell atmosphere gaseous radioactivity monitors is dependent on the design assumptions and the plant-specific licensing basis as described in the plant's updated final safety analysis report (UFSAR). The NRC staff's approval of the use of expected primary coolant radioactivity concentration values used in the environmental report creates a potential licensing conflict when a licensee is able to achieve and maintain primary coolant radioactivity concentration values lower than the value assumed in the environmental report.

The RG 1.45, Revision 1, "Guidance on Monitoring and Responding to Reactor Coolant System Leakage," was issued in May 2008 (ADAMS Accession No. ML073200271). RG 1.45, Revision 1, describes methods for implementing the GDC 30 requirements that are different from those in RG 1.45, Revision 0, and was developed and issued to support new reactor

licensing. Revision 1 allows that having two TS leakage detection methods capable of detecting a one gpm leak within one hour provides adequate leakage detection capability from a safety perspective. It recommends that other potential indicators (including the gaseous radiation monitors) be maintained even though they may not have the same detection capability. These indicators, in effect, provide additional defense-in-depth.

The detection methods at PNPP for small unidentified leaks within the drywell include monitoring of floor drain sump in leakage, upper air cooler condensate flow rate, and atmospheric gaseous and particulate radioactivity, as described in PNPP UFSAR, Section 5.2.5.1.1, "Detection of Leakage within the Drywell." UFSAR Section 5.2.5.2.1, "Leak Detection Instrumentation and Monitoring inside Drywell," describes these methods. A public version of the UFSAR is available in the NRC Public Document Room (PDR). Documents may be examined, and/or copied for a fee, at the NRC's PDR, located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland or you can contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or send an e-mail to pdr.resource@nrc.gov.

UFSAR Section 5.2.5.10, "Regulatory Guide 1.45 Compliance," states:

- a. Small unidentified leaks (5 gpm and less) inside the drywell are detected by temperature changes, pressure changes, sump fill rate activities, fission product monitoring, and upper drywell cooler condensate flow monitoring. Large leaks are also detected by changes in reactor water level and changes in flow rates in process lines.
 - The 5 gpm leakage rate is the plant Technical Specification limit on unidentified leakage inside the drywell. The leak detection system is fully capable of monitoring the flow rates of 1 gpm and is thus in compliance with Position C.2 of [RG 1.45].
- c. By monitoring floor drain sump level (flow rate), airborne particulate radioactivity, cooler condensate flow rate and airborne gaseous radioactivity, Position C.3, is satisfied.
- e. The [drywell] floor drain sump monitoring, and the upper [drywell] air cooler condensate monitoring systems are designed to detect leakage rates of 1 gpm within 1 hour, thus meeting Position C.5 [of RG 1.45]. The fission products monitoring subsystem is not designed to detect leakage rates of 1 gpm within 1 hour. In UFSAR, Section 5.2.5.10, it indicates that given these as well as other methods described in the PNPP UFSAR, the leakage detection systems meets the intent of RG 1.45.

The NRC stated in NUREG-0887, "Safety Evaluation Report related to the operation of the Perry Nuclear Power Plant, Units 1 and 2," Supplement No. 7, dated November 1985 (ADAMS Accession No. ML109130484), Section 5.2.6, the PNPP reactor coolant pressure boundary leakage detection systems meet the applicable acceptance criteria in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, LWR Edition,"

Section 5.2.5, "Reactor Coolant Pressure Boundary Leakage Detection", dated March 2007 (ADAMS Accession No. ML070610277). The applicable NUREG-0800 acceptance criterion is GDC 30 which is based on meeting the guidelines of Regulatory Guide 1.45.

3.0 TECHNICAL EVALUATION

In adopting the changes to TS included in TSTF-514, Revision 3, the licensee proposed to revise TS 3.4.7, "RCS Leakage Detection Instrumentation," Conditions and Required Actions. The licensee proposed adding new Condition D to TS 3.4.7. New Condition D would be applicable when the drywell atmospheric gaseous monitoring system is the only operable RCS leakage detection system. This new Condition is necessary due to improved fuel integrity and the resulting lower primary coolant radioactivity concentration affect on the response of a plant's drywell atmospheric gaseous monitoring system to a greater extent than the response of other RCS leakage detection monitors to leakage radioactivity. The proposed Required Actions for new Condition D require the licensee to analyze grab samples of the drywell atmosphere once every 12 hours, restore either the drywell upper air cooler condensate flow rate monitoring system or the required drywell floor drain sump monitoring system to operable status within seven days, and monitor RCS leakage by administrative means once every 12 hours.

Administrative means of monitoring RCS leakage include trending parameters that may indicate an increase in RCS leakage. There are diverse alternative methods from which appropriate indicators for identifying RCS leakage may be selected based on plant conditions. FENOC will utilize the following methods considering the current plant conditions and historical or expected sources of unidentified leakage, as their TS administrative means: drywell pressure, drywell temperature, and manual timing of the drywell floor drain sump pump-out.

The NRC staff determined that the proposed Condition D is more restrictive than the current requirement because there is no current TS condition for the plant condition of the drywell atmospheric gaseous monitoring system being the only operable RCS leakage detection monitor. The associated proposed Actions and Completion Times are adequate because monitoring the RCS by administrative means, coupled with drywell atmospheric grab samples. are sufficient to alert the operating staff to an unexpected increase in unidentified leakage. The drywell atmospheric grab samples provide a method of detecting particulate and gaseous radioactive material in the drywell atmosphere. However, taking frequent grab samples will ensure there is no significant loss of monitoring capability during the Required Action Completion Time. The 12-hour interval is reasonable given the availability of the drywell atmospheric gaseous monitoring system. Allowing seven days to restore another RCS leakage monitor to operable status is reasonable given the diverse methods employed in the Required Actions to detect an RCS leak and the low probability of a large RCS leak during this period. Proposed Condition D is conservative relative to the STS, sufficiently alerts the operating staff, provides a comparable ability to detect RCS leakage, and provides time intervals that are reasonable. Therefore, the NRC staff determined that proposed Condition D provides an adequate assurance of safety when judged against current regulatory standards.

The licensee proposes minor changes to ensure continuity of the TS format. These changes re-letter current Condition D, which applies when the drywell floor drain sump monitoring system is the only operable RCS leakage detection instrument, to Condition E, and current Condition E, which applies when the required action and the associated Completion Time are not satisfied to Condition F and current Condition F, which applies when all required leakage detection systems are inoperable to Condition G. Similar changes were made to the associated Required Actions. The NRC staff determines that these changes are editorial and therefore acceptable.

In adopting TSTF-514, Revision 3, the licensee proposed changes that would revise the TS Bases for TS 3.4.7 to reflect the proposed TS changes and more accurately describe the contents of the facility design basis related to operability of the RCS leakage detection instrumentation and reflect the proposed TS changes. 10 CFR 50.36(a)(1) requires a summary statement of the TS Bases or reasons for such specifications be included with the application. The proposed TS Bases changes related to operability of the RCS leakage detection instrumentation are acceptable because they are consistent with the design basis of the facility and provide: background information, applicable safety analyses, a description of the limiting condition for operation, and the applicability for the RCS leakage detection instrumentation TS. These instruments satisfy Criterion 1 of 10 CFR 50.36(c)(2)(ii) in that they are installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the RCPB.

The NRC staff evaluated the licensee's proposed changes against the applicable regulatory requirements listed in Section 2.0 of this safety evaluation. The NRC staff also compared the proposed changes to the changes made to STS by TSTF-514, Revision 3. The NRC staff determined that all the proposed changes afford adequate assurance of safety when judged against current regulatory standards. Therefore, the NRC staff finds the proposed changes acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Ohio State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 [or changes a surveillance requirement]. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding (76 FR 31373; May 31, 2011). Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

6.0 CONCLUSION

The NRC staff has concluded, based on the considerations discussed above, that there is a reasonable assurance (i) that the activities authorized by the operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations, and the issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: K. Bucholtz

Date of issuance: October 4, 2011

M. Pacilio - 2 -

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Michael Mahoney, Project Manager Plant Licensing Branch III-2 Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures:

1. Amendment No. 159 to NPF-58

2. Safety Evaluation

cc w/encls: Distribution via Listserv

DISTRIBUTION:

PUBLIC LPL3-2 R/F
RidsOgcRp Resource
RidsRgn3MailCenter Resource
RidsAcrsAcnw_MailCTR Resource

RidsNrrPMPerry Resource RidsNrrDirsItsb Resource RidsNrrLASRohrer Resource RidsNrrDorlLpl3-2 Resource RidsNrrDorlDpr Resource RidsNrrDirsItsb Resource

Amendment Accession No. ML112521122 NRR-058 *By Memo Dated

OFFICE	LPL3-2/PM	LPL3-2/LA	DIRS/ITSB	OGC(NLO)	LPL3-2/BC
NAME	MMahoney	SRohrer	RElliott	DRoth	JZimmerman
DATE	9/28/11	9/28/11	6/1/2010*	9/20/11	10/04/11