



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

June 4, 2021

MEMORANDUM TO:

Kerri A. Kavanagh, Chief  
Quality Assurance and Vendor Inspection Branch  
Division of Reactor Oversight  
Office of Nuclear Reactor Regulation

A handwritten signature in black ink, appearing to read "Paul Prescott".

Signed by Prescott, Paul  
on 06/04/21

Quality Assurance and Vendor Inspection Branch  
Division of Reactor Oversight  
Office of Nuclear Reactor Regulation

SUBJECT:

AUDIT PLAN FOR THE LIMITED SCOPE AUDIT OF ARGONNE  
NATIONAL LABORATORY

VENDOR:

ARGONNE NATIONAL LABORATORY (ANL)

VENDOR CONTACT:

Abdellatif Yacout, Quality Manager

VENDOR LOCATION:

9700 S. Cass Avenue  
Lemont, IL 60439

AUDIT DATES:

June 7 - 11, 2021

INSPECTION TEAM:

Paul Prescott  
Nicholas Savvoir

NRR/DRO/IQVB  
NRR/DRO/IQVB

Team Leader

CONTACT:

Paul Prescott  
301-415-3026

NRR/DRO/IQVB

SUBJECT: AUDIT PLAN FOR THE LIMITED SCOPE AUDIT OF ARGONNE NATIONAL  
LABORATORY Dated: June 4, 2021

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**ADAMS Accession No.:** ML21155A022

**NRR-106**

<b>OFFICE</b>	NRR/DRO/IQVB	NRR/DRO/IQVB
<b>NAME</b>	PPrescott*	KKavanagh
<b>DATE</b>	06/4/2021	06/4/2021

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## Argonne National Laboratory Remote Audit Plan

### AUDIT BASES

The audit team will use Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," as guidance.

### AUDIT PURPOSE AND INSPECTION PROCEDURES TO BE USED

1. To verify Argonne National Laboratory (hereafter referred to as ANL) Quality Assurance Program Plan (QAPP) provides adequate quality assurance (QA) programmatic controls to validate key legacy nuclear fuel developmental information and plant data for use by potential applicants.
2. To verify that the scope of the activities, programmatic controls, and associated procedures described in the application are implemented to demonstrate equivalence to Appendix B to 10 CFR Part 50.
3. To verify ANL's QAPP validation process is equivalent with American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA)-1-2008/2009 Standard, Part III, Subpart 3.3, Non-Mandatory Appendix 3.1, "Guidance on Qualification of Existing Data" and Software Quality Assurance Plan (SQAPP) is equivalent with NQA-1-2008, Part II, Subpart 2.7.

Inspection Procedures (IPs) to be used include IP 43002, "Routine Inspections of Nuclear Vendors," and IP 35017, "Quality Assurance Implementation Inspection."

### BACKGROUND

ANL, located in Lemont, IL, is a multidisciplinary science and engineering research national laboratory operated by UChicago Argonne LLC for the United States Department of Energy (DOE). ANL submitted Quality Assurance Program Plan (QAPP) Revision 2, October 21, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19311C506) in accordance with the quality assurance programmatic controls contained in Appendix B to 10 CFR 50.

### AUDIT SCOPE AND TEAM ASSIGNMENTS

The NRC audit team will review the implementation of quality assurance programmatic controls in the following areas:

**Paul Prescott** – Validation process in accordance with NQA-1-2008/2009, Part III, Subpart 3.3 and software in accordance Part II Subpart 2.7

**Nicholas Savvoir** – Validation process in accordance with NQA-1-2008/2009, Part III, Subpart 3.3 and software in accordance Part II Subpart 2.7

**\*Note:** Each audit team member is responsible for the review of personnel training and qualifications in their respective areas.

## Validation Process

The ANL QAPP validation process is based on a modified version of NQA-1, 2008, Part III, Subpart 3.3 Non-Mandatory Appendix 3.1, "Guidance on Qualification of Existing Data," for qualification of existing data. The data qualification process includes data qualification planning, a controlled process for evaluating and establishing data quality, and documentation of the results of this process. Appendix 3.1 is comprised of four qualification methods including a) quality assurance program equivalency, b) data corroboration c) confirmatory testing and d) peer review. ANL has taken exception to confirmatory testing as a method available for data validation.

## Software

The ANL QAPP is the top-level policy document that establishes the method in which programmatic quality controls are achieved for evaluating and controlling the sodium-cooled fast reactor (SFR) legacy fuel data. In accordance with ANL's QAPP, ANL has prepared software under a Software Quality Assurance Plan (SQAPP) in accordance with the programmatic controls of NQA-1-2008, Part II, Subpart 2.7.

## LOGISTICS

Remote audit conducted virtually on designated vendor supported platform or by phone.

The entrance meeting for this audit is planned remotely Monday, June 7, 2021. Daily team meetings will be conducted.

An exit meeting will be tentatively scheduled for 10:00 a.m. on Friday, June 11, 2021, remotely. Please note that this schedule is subject to change based on the results of the NRC audit team's daily progress.

Audit Schedule: 9:00 a.m. to 5:30 p.m., followed by the daily team meeting and vendor debrief. (Assuming that the vendor can support).

Time charge information: The NRC audit team will charge time in HRMS to CAC No. A17017.

## DELIVERABLES

A written outline of findings and observations for input to the Team Leader is required for the exit meeting development by close of business (COB) Thursday, June 10, 2021.

Draft input to the audit report should be submitted to the Team Leader by COB Wednesday, June 16, 2021. Inputs should be formatted in a manner consistent with Inspection Manual Chapter 0617, "Vendor Inspection Reports."

Management review and approval of the audit report is due by Monday, July 26, 2021, to meet the 45-day report timeliness requirement.