

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-313/85-08  
50-368/85-08

Licenses: DPR-51  
NPF-6

Dockets: 50-313; 50-368

Licensee: Arkansas Power and Light Company (AP&L)  
P. O. Box 551  
Little Rock, Arkansas 72203

Facility Name: Arkansas Nuclear One (ANO), Units 1 and 2

Inspection At: ANO Site, Pope County, Russellville, Arkansas

Inspection Conducted: May 13-14, 1985

Inspector: Blaine Murray 6/18/85  
for H. D. Chaney, Radiation Specialist, Facilities Radiological Protection Section Date

Accompanying Personnel: A. W. Grella, Senior Health Physicist, Safeguards & Materials Programs Branch, IE

Approved: Blaine Murray 6/18/85  
Blaine Murray, Chief, Facilities Radiological Protection Section Date

L. E. Martin 6/24/85  
Lawrence Martin, Chief, Project Section A Reactor Project Branch 2 Date

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Inspection Summary

Inspection Conducted May 13-14, 1985 (Report 50-85-08; 50-368/85-08)

Areas Inspected: Routine, unannounced inspection of the licensee's radioactive material (RAM) transportation activities, low-level radioactive waste (LLRW) management program and LLRW onsite storage facilities. The inspection involved 18 inspector-hours onsite and 5 inspector-hours offsite by one NRC inspector.

Results: Within the areas inspected, no violations or deviations were identified.

DETAILS1. Persons ContactedANO

J. M. Levine, ANO General Manager  
 †\*M. L. Pendergrass, Acting Engineering and Technical Support Manager  
 †\*D. Akins, Radioactive Waste Supervisor  
 †\*M. J. Bolanis, HP Superintendent  
 B. L. Bata, Quality Assurance Engineer  
 †\*P. L. Campbell, Licensing Engineer  
 \*T. H. Cogburn, Special Projects Manager  
 \*L. W. Humphrey, Administrative Manager  
 \*D. M. Lomax, Plant Licensing Supervisor  
 \*D. D. Snellings, AP&L Corporate Health Physicist  
 J. D. Vandergrift, Training Superintendent  
 D. Wagner, Assistant HP Superintendent  
 L. W. Schempp, Quality Control Manager

Others

\*W. D. Johnson, NRC Senior Resident Inspector  
 \*A. W. Grella, Senior Health Physicist, IE, NRC

The NRC inspectors also contacted other licensee and contractor employees including HP personnel.

\*Denotes those present at the exit interview.

†\*Denotes those persons involved in a followup telephone conference on May 28, 1985.

2. Radioactive Material Transportation Program

The NRC inspector reviewed the licensee's RAM shipment program to determine compliance with the commitments in the Final Safety Analyses Reports (FSARs) for Units 1 and 2; and compliance with the requirements of the facility technical specifications (TS), 10 CFR Parts 20 and 71, and Department of Transportation (DOT) regulations contained in 49 CFR Parts 170-189. The NRC inspector also reviewed licensee activities in regard to selected NRC Information Notices and Bulletins concerning RAM transportation activities.

a. Organization and Management Controls

The NRC inspector reviewed the licensee's organization and recent changes to verify agreement with the TS and FSARs. The NRC inspector determined that the licensee's HP group and the radioactive waste

(radwaste) section were as depicted in the latest revision of the ANO FSARs. A significant turnover of key supervisors in the radwaste section had occurred during the past 12 months which has resulted in a reduction in the experience level of personnel responsible for supervision of waste management and RAM transportation activities. The NRC inspector noted that the new radwaste supervisor (in charge of overall radwaste activities) and the assistant radwaste supervisor (responsible for waste packaging and transportation activities) had limited work experience concerning NRC and DOT RAM transportation regulations. The assistant radwaste supervisor had been assigned to his position for approximately 6 months and his immediate supervisor had been in his position for about two weeks. Both individuals appear to satisfy the qualification requirements of paragraph 4.3.2 of ANSI N 18.1-1971. The licensee indicated that both new supervisors were being provided increased management oversight. Based on established procedures and computer programs for radwaste classification/characterization and transportation program and the broad HP experience of the new radwaste supervisors, there were no observable adverse effects from the personnel turnover in the radwaste department.

The licensee had established detailed job/assignment position descriptions for responsible positions. The licensee's operational procedures for radwaste activities are reviewed by the Plant Safety Committee and are subject to the same review and approval as those that govern all other plant procedures. The NRC inspector noted that operational procedures, such as, 1603.006, "Disposal of Spent Radioactive Resin," require supervisory signature controls for specific work phases. It was also noted that RAM shipment releases require review and signature by two supervisors. The licensee's policies, administrative and operational procedures, position descriptions and current functional assignments for HP group personnel involved in radwaste transportation activities appear to be sufficient for assuring effective control over activities involving RAM.

b. Training and Qualifications

The NRC inspector discussed with ANO training department and HP group personnel current and planned training activities involving RAM transportation activities. The NRC inspector also reviewed training procedure 1063.26, "Radwaste Training Program," radwaste transportation training program lesson plans and training aids, and discussed the scheduled retraining program for workers in the radwaste section. The NRC inspector discussed with licensee representatives a June 1985 scheduled training program on radwaste management and transportation regulations. Two, three day sessions are planned. The NRC inspector noted to the licensee's representatives that QA and QC personnel responsible for auditing transportation activities were not designated to attend the training, but that they could benefit from attending these training sessions. The NRC inspector also noted that the licensee had approved the procurement

of two contract instructors to supplement the two permanent HP instructors in the training department. The NRC inspector noted to the licensee that most radwaste lesson plans needed to be updated. The licensee's representatives indicated that an update of the lesson plans would be undertaken prior to start of technician retraining. Employee training and the annual retraining are in accordance with licensee commitments to NRC Bulletin 79-19 and the requirements of 49 CFR Part 173.1(b).

The NRC inspector reviewed resumes of selected personnel in the radwaste section, held discussions with both of the radwaste supervisors, and determined that they satisfied the TS requirements concerning personnel qualifications.

c. Audits and Reviews

The NRC inspector reviewed the licensee's HP audit procedure, QC surveillances of radwaste activities, and discussed with senior HP group management personnel the periodic oversight reviews of radwaste activities. The NRC inspector noted that the QC group reviews transportation activities. The QA department had last performed an audit of radwaste/transportation activities during the last and first calendar quarters of 1984 and 1985 respectively. This audit (QAP-3) included a QA department person with HP experience involving radwaste and transportation activities and involved detailed checklists.

d. Quality Assurance Program

The NRC inspector reviewed the licensee's response to NRC Information Notice No. 84-50. The licensee's internal memoranda (September 7, 1984) addresses the licensee's affirmation that their 10 CFR Part 50, Appendix B, QA program addresses all the pertinent aspects of the 10 CFR Part 71, Subpart H, QA program areas as they apply to transportation packages. The NRC inspector reviewed receipt inspection records for RAM liners used in NRC certified packages, checklists, and procedures used by both radwaste and QC personnel during preparation, loading and shipping of RAM packages and radioactive wastes.

e. Procurement and Selection of Packaging

The NRC inspector reviewed the licensee's procurement of DOT and NRC certified packagings. The NRC inspector noted that the licensee had only shipped RAM and LLRW via low specific activity (LSA) criteria (strong tight container) or in high integrity containers (HIC) inside of NRC certified packages per 10 CFR Part 71.10(b)(1). The licensee was noted to have available appropriate documents on design, use, maintenance, testing, and NRC/DOT certification, including letters of user status to the NRC on all casks routinely used. Procedures regarding onsite cask/packaging were reviewed.

f. Determination of Packaging Activity and Specific Radionuclide Identification

The NRC inspector noted that the licensee's manual procedures and the computer based program for determining the maximum activities of curie content in RAM packages and classification of LLRWs for disposal per Part 10 CFR 61 used accepted methodologies combined with a yearly QC check of the procedure. The licensee uses a computer program of waste stream gamma isotopic analyses and scaling factors to determine concentrations of radionuclides not listed in 49 CFR Part 173.435. Several radioactive shipment records were reviewed and found satisfactory.

g. Preparation of Packages for Shipment

The NRC inspector reviewed the licensee's procedures involving preparation of packages for shipment. The NRC inspector determined that checklists were routinely used for opening, inspecting, loading and closing packages. The NRC inspector observed loading of dewatered radioactive filters in liners into NRC certified casks. Preparation of packages appeared to be satisfactory. Detailed procedures were noted to be implemented for compaction and loose packing of LLRW packages. The NRC inspector reviewed the licensee's internal correspondence regarding control of hydrogen gas generation in LLRW packages discussed in NRC Information Notice 84-72. The licensee stated that hydrogen gas generation was controlled to non-combustible quantities by allowing liners to freely vent to their storage container atmosphere until just prior to shipment, at which time the liners are capped. The NRC inspector noted during the preparation of metal HICs containing dewatered filters that the aforementioned capping was accomplished; however, the NRC inspector noted to the licensee his concern that the delayed capping program, for ensuring hydrogen gas generation/buildup was minimized, was not described in a written procedure. The NRC inspector discussed his concerns regarding the lack of a written procedure for hydrogen gas generation control from RAM waste packages at the exit meeting on May 14, 1985. The licensee stated, during a follow-up telephone conversation with the NRC inspector on May 20, 1985, that written procedures adequate to satisfy NRC Information Notice 84-72 would be completed by July 5, 1985.

h. Delivery of Packages to Carrier

The NRC inspector observed the licensee preparing, loading, and labeling waste packages; placarding vehicles; performing radiation surveys; and completing shipping documents for a trailer loaded with 2 casks of dewatered filters. The shipment was classified as LSA greater than type A quantities and shipped via a sole use vehicle.

Loading was performed in accordance with procedures and the shipment appeared to satisfy NRC and DOT requirements.

i. Records, Reports, and Notifications

The NRC inspector reviewed procedures concerning RAM shipping documents/records, advance notification of shipments, and radiological survey records. The NRC inspector also reviewed the licensee's method from tracking LLRW shipments and confirmation of arrival at specified destinations (10 CFR Part 20.311(d)(8)). The NRC inspector noted that the licensee used a shipping manifest issued by the contracted burial site that satisfied the requirements of 10 CFR Part 20.311(b). The licensee was noted to routinely notify state governments along LLRW transport routes. The NRC inspector reviewed selected RAM and LLRW shipment records for 1985 and noted that documentation satisfied the requirements of licensee procedures, DOT and NRC regulations. Primarily, the licensee's shipments involved LSA and exempt/limit quantity materials shipped via sole use vehicle or common carrier.

No violations or deviations were identified.

3. Radioactive Waste Classification, Characteristics, and Shipping Manifest

The NRC inspector reviewed the licensee's LLRW radwaste program to determine compliance with the requirements of 10 CFR Part 20.311 and 10 CFR Parts 61.55 and 61.56.

The licensee's program, including solidification and dewatering of wet wastes, was previously discussed in NRC Inspection Report 50-313/84-19. The licensee's organization, staffing, training and QA/QC activities are as noted in paragraph 2 of this report. The NRC inspector noted that the licensee had phased out the routine solidification of wet wastes (resins and filters) and had contracted a vendor to provide, dewatering services. The vendor's process had been incorporated into a procedure. The licensee possessed a copy of the vendor topical report. The licensee also ships spent filters in HICs. The vendor's and the licensee's processes both satisfy the free standing water criteria of 10 CFR Part 61.56(a) and have been accepted by the licensee's burial contractor. The licensee's process for dewatering of filters is verified on an annual basis by controlled testing. This filter processing is being reviewed by the NRC staff (Division of Waste Management) under the provisions of a state technical assistance agreement. The licensee was noted by the NRC inspector to be staging low-level contaminated lubricating oils (approximately 12,000 gallons) for solidification in 55 gallon containers. The licensee will be using an approved process control program. The NRC inspector discussed with licensee representatives during the exit meeting on May 14, 1985, and during a followup telephone conversation on May 20, 1985, the NRC inspector's concerns regarding

transfer and filing of dewatering procedure data logs for the evaluations conducted on or about January 21, 1985. The NRC inspector's concerns involved the late transfer of data logs to permanent record storage which the licensee representatives indicated during the May 20, 1985, telephone conversation would be resolved by improving the timeliness of record transfer and data log completion.

The NRC inspectors determined that the licensee's LLRW management program was conducted in such a manner that the requirements of 10 CFR Part 20.311 and 10 CFR Part 61 appear to have been satisfied.

No violations or deviations were identified.

#### 4. Onsite Interim LLRW Storage Facility

The NRC inspector reviewed the licensee's preparations for establishing an onsite LLRW storage facility for compliance with facility licensing conditions (Unit 2) and the recommendations of NRC Generic Letter 81-38, NRC Office of Inspection and Enforcement Circular 80-18, NRC Regulatory Guide (RG) 1.143, and NUREG 0800.

The NRC inspector determined that the licensee had begun construction of an onsite LLRW facility of approximately 20,000 square feet of floor space with approximately 116,080 cubic feet of LLRW storage space. The facility was previously described in NRC Inspection Report 50-368/84-19 and licensee correspondence to the NRC dated February 25, 1985 (AP&L Serial No. OCAN028503). The NRC inspector discussed the current status of construction and the provisions being provided in the facility for monitoring of waste container/package degradation. The facility will have dedicated areas for container inspection, plus a closed circuit television system for monitoring the storage area. Facility construction was started on or about April 1, 1985, and is on schedule for a completion date of November 1, 1985. Construction is being controlled by an onsite AP&L construction manager.

No violations or deviations were noted.

#### 5. Exit Interview

The NRC inspector met with the NRC resident inspector and licensee representatives denoted in paragraph 1 on May 14, 1985. A followup telephone conference call was held with individuals indicated in paragraph 1 on May 20, 1985. The NRC inspector summarized the scope and findings of the inspection as presented in this report. The licensee stated that:

- a. QA/QC personnel responsible for auditing the transportation program would attend training sessions involving transportation activities.
- b. The NRC inspector's concerns regarding Information Notice 84-72 would be reviewed.