APPENDIX B

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-313/84-09 Licenses: DRP-51
50-368/84-09 NPF-6

Dockets: 50-313
50-368

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

Facility Name: Arkansas Nuclear One (ANO)

Inspection At: Russellville, Arkansas

Inspection Conducted: March 26-April 6, 1984

Inspector: _____ 5/3/84
R. E. Baer, Radiation Specialist Date

Approved: _____ 5/3/84
for Blaine Murray, Chief, Facilities Radiation Protection Section Date

_____ 5/8/84
W. D. Johnson, Chief, Project Section A Date
Reactor Project Branch 2

Inspection Summary

Inspection Conducted March 26-April 6, 1984 (Report 50-313/84-09; 50-368/84-09)

Areas Inspected: Routine, unannounced inspection of: (1) licensee action on previously identified violations and open items; (2) radiation protection organization; (3) training and qualifications; (4) maintaining occupational exposures ALARA; (5) external occupational exposure control; (6) internal exposure control; (7) control of radioactive material and contamination, surveys, and monitoring; (8) facilities and equipment; and (9) audits. The inspection involved 104 inspector-hours onsite by one NRC inspector.

Results: Within the nine areas inspected, one violation was identified (failure to follow procedures - see paragraph 5).

DETAILS

1. Persons Contacted

AP&L

*J. M. Levine, General Manager
*M. J. Bolanis, Health Physics (HP) Superintendent
D. W. Boyd, Emergency Plan Coordinator
B. C. Burchard, HP Supervisor
*T. H. Cogburn, Special Project Manager
R. M. Cooper, Quality Assurance Engineer
J. D. Deal, Trainer, HP/Radioactive Waste (Radwaste)
E. C. Ewing, Engineering and Technical Support Manager
R. E. Green, HP Supervisor
W. L. Hada, HP Supervisor
D. L. Helm, HP Specialist, ALARA Coordinator
R. E. Jackson, Lead Trainer, Administrative
*D. D. Lomax, Plant Licensing Supervisor
I. Mosquito, Trainer, General Employee Training
*G. D. Provencher, Quality Assurance Supervisor
T. M. Rolniak, Lead Trainer, HP/Radwaste
*L. W. Schempp, Manager, Nuclear Quality Control
D. D. Snellings, Corporate Health Physicist
F. P. VanBuskirk, Emergency Plan Coordinator
D. J. Wagner, Assistant HP Superintendent
J. R. Waid, Training Supervisor

Others

C. R. Bowles, ALARA Coordinator, Babcock and Wilcox
*P. H. Harrell, Resident Reactor Inspector, USNRC

The NRC inspector also interviewed several other licensee and contractor employees including HP. administrative, operations, and maintenance personnel.

2. Licensee Action on Previous Inspection Findings

(Closed) Violation (313/8236-01; 368/8237-01): Personnel MPC-HR-Bioassay - Involved the licensee's failure to ensure that procedural requirements requiring personnel bioassays at certain levels of personnel exposure to airborne radioactivity were being complied with. The licensee had revised the Radiological Protection Procedure 1609.010, "Calculation of MPC Hours and Stay Times," Revision 2, dated September 28, 1983, and required the HP technicians to perform calculations of MPC hours and stay times on a day-to-day basis on Form 1609.010B. These forms are reviewed by the HP supervisor and these data are recorded in the individual's MPC Hours Record, Form 1609.010A. The MPC hours are tracked for the past 24 hours and past 7 days. This item is considered closed.

(Closed) Violation (313/8236-02): Final Safety Analysis Review (FSAR) Update - Involved the licensee's failure to update the FSAR to identify that certain areas within the Unit 1 reactor containment exhibited radiation levels above the design values presented in the FSAR. The licensee had submitted an amendment to the FSAR which included Figures 11-5, 11-6, and 11-9, which accurately depict the radiation levels within the Unit 1 reactor containment. This item is considered closed.

(Closed) Open Item (368/8122-05): Evaluation of Contractor HP Personnel Qualifications - Involved the lack of procedures to determine the qualification and previous work experiences of contractor HP technicians. The licensee had implemented ALARA Procedure 1612.013, "Contract HP Technician Selection," Revision 0, August 1, 1983, which establishes the minimum qualifications acceptable for senior and junior grade contractural HP technicians. Specific requirements, which include the individual's capability summary, oral exam and interview sheet, a field evaluation, and testing requirements, are also used as part of this evaluation. This item is considered closed.

(Closed) Open Item (313/8236-04): ALARA Program Weakness - Involved the lack of corporate management review of quarterly performances/improvements; not having a quarterly ALARA report issued from the plant; not revising the employees training to resolve identified problems with personnel contamination incidents; not revising the Personnel Contamination Record, Form 1622.010A, to provide additional information for evaluating the basic cause of the incident; and not providing more emphasis to be directed by the HP group toward contamination control practices. The licensee had incorporated changes to Procedure 1000.33, "ANO ALARA Manual," Revision 1, PC-3, December 10, 1982, which provides for quarterly reports of performance. These quarterly reports are sent to corporate management. Radiation worker training had been revised to include a practical factors segment where workers demonstrate their ability to properly suit up and remove protective equipment and clothing. The Personnel Contamination Record, Form 1622.010A, had been revised to include additional information so that a determination could be made as to the principal cause for the contamination incident and such that improvements could be directed to reduce the number of incidents. This item is considered closed.

(Closed) Open Item (313/8313-01; 368/8313-01): Radwaste Coordinator Qualifications - Involved the lack of an individual to meet the personnel qualifications as defined in the licensee's position description. The NRC inspector reviewed the qualifications of the individual assigned to the position of radwaste supervisor to the licensee's position description and determined that the individual presently meets the established criteria for the position. This item is considered closed.

(Closed) Open Item (313/8313-03; 368/8313-03): Respiratory Protection Policy - Involved the lack of a station respiratory protection program policy from a high management source as recommended by NRC Regulatory Guide (RG) 8.15. The NRC inspector reviewed corporate policy statements

issued by the Nuclear Operations Vice President and ESD-83-14, "Respiratory Protection," December 14, 1983, that had been issued and included the use of engineering controls instead of respirators; routine, nonroutine, and emergency use of respirators; periods of respirator use; and relief from respirator use as recommended by NRC RG 8.15. This item is considered closed.

3. Organization and Management Controls

The NRC inspector reviewed the licensee's radiation protection organization for changes since the last inspection; compliance with Updated Safety Analysis Report (USAR), Technical Specifications (TS) requirements, and the recommendations of NUREG-0761 and ANSI/ANS Standard N18.1-1971.

The licensee had revised the station HP organization and now has dedicated positions for an HP dosimetry supervisor, four dosimetry technicians, and four data entry clerks. The position description for the dosimetry supervisor was in the process of being finalized at the station level during the time of this inspection. An HP supervisor was temporarily filling the position of dosimetry supervisor until a suitable candidate for this position is selected.

The NRC inspector discussed with licensee representatives the present organization and level of staffing. The licensee had not filled all positions authorized and did not appear to have an aggressive program to fill these vacancies. The licensee had openings for one HP specialist; one dosimetry supervisor; four dosimetry technicians; and four HP technicians, one offer had been made for an HP technician and the licensee had hired two data entry clerks.

The NRC inspector discussed with licensee representatives the observation that the functional organization for the plant operation chart depicted in the USAR, Figure 12.1-4 for Unit 1 and Figure 13.1-4 for Unit 2, was not consistent with the organizational chart, Figure 6.2.2 for both units, depicted in the TS. The licensee stated that the USAR charts would be amended in the next amendment submitted to the NRC due approximately July 1984. The NRC inspector stated that this will be considered an Open Item 313/8409-02; 386/8409-02 pending the amendment to the appropriate USAR figures.

No violations or deviations were identified.

4. HP Training and Qualifications

The NRC inspector reviewed the qualifications and training requirements for the ANO training department and HP group for compliance with TS, 10 CFR Part 19, and the recommendations of RGs 8.1, 8.13, 8.27, and 8.29 and ANSI/ANS Standard N18.1-1971.

The NRC inspector reviewed the qualifications of all supervisory and technical staff members presently employed versus their position requirements. All personnel appeared to meet these position requirements. The NRC inspector noted that those individuals who present training and assigned responsibility for implementation of the respiratory protection program had not received formal training in the methodology and limitations of respiratory protection equipment. These individuals had received only that training offered by the respirator manufacturer.

The NRC inspector expressed concern to licensee representatives that female employees only document RG 8.13, "Instruction Concerning Prenatal Radiation Exposure," training the first time the training is received. Retraining is provided that specifies the radiation exposure limits for the gestation period, but the individual is not required to document this training and is advised to immediately notify the radiation protection manager when pregnancy is suspected.

The NRC inspector noted that individuals are allowed to receive abbreviated HP indoctrination if the trainer deems the individual had sufficient HP training and experience at other facilities. Training Procedure 1063.07, "General Employee Training Program," does not provide any guidance to the trainer to make the decision as to what is considered "sufficient HP training and experience at other facilities." The NRC inspector reviewed the training records of contractors that had no experience at other facilities, but had received training on a specific job task by a nuclear steam system supplier (NSSS). The NRC inspector reviewed the lesson plan, discussed the course content with a representative from the NSSS, and concluded that sufficient previous training had been provided.

No violations or deviations were identified.

5. External Occupational Exposure Control and Personal Dosimetry

The NRC inspector reviewed the licensee's external occupational exposure control and personal dosimetry program for compliance with the requirements of 10 CFR Parts 19.13, 20.101(a), 20.101(b), 20.102, 20.202(a), 20.104(a), and 20.401(a) and the recommendations of RGs 8.2, 8.3, 8.4, 8.7, 8.14, and 8.28 and ANSI Standards N13.11-1983 and N13.15-1981.

The NRC inspector reviewed selected licensee training and exposure history records for 43 current and past ANO employees and verified that administrative limits were adhered to, or prior authorization to exceed these limits had been obtained, as required by Station Procedure 1622.011, "Exposure Limits and Monitoring Techniques."

The licensee processes TLDs during normal operation once a month or once per quarter depending on the exposure recorded on the individual's self-reading dosimeter (SRD). The SRDs are read and recorded each time the individual exits the radiologically controlled area. These data are entered into the

exposure control system and used to track the individuals exposure until the TLDs are read, at which time the TLD data becomes the official exposure record.

The NRC inspector noted that the licensee did not have a quality assurance check on data input into the exposure control program. The NRC inspector discussed with licensee representatives the desirability of ensuring that data entered into the exposure control program be checked for accuracy at the same time a review of exposure received versus exposure limits would help to prevent exposures greater than the administrative limits from occurring.

The NRC inspector also noted that the location of the dosimetry data computer terminal located at the Unit 2 controlled access area would probably not be accessible during an accident. The licensee would have to rely on the dosimetry data computer terminal located in the Emergency Control Center (ECC) and information relayed from the reactor site for input into the exposure control system via the ECC.

The NRC inspector reviewed the quarterly performance test data for 1983 of TLDs conducted by the licensee. The licensee sends 18 TLDs plus 2 control TLDs to an independent laboratory for irradiation at National Bureau of Standards traceable dose rates. The independent laboratory provides data which shows the actual exposure given to each TLD. The table below depicts the date the licensee sent TLDs out for irradiation and when they were (received) processed by the licensee.

TABLE

PERIOD	DATE SENT	PROCESSED
1st Qtr	Not Available	4/8/83
2nd Qtr	4/15/83	4/29/83
3rd Qtr	9/23/83	11/4/83
4th Qtr	10/15/83	11/21/83

The licensee did not have data of the actual exposures given to the second quarter performance test TLDs and had written the laboratory on March 4, 1984, requesting a copy of this data. The NRC inspector expressed concern that the TLD performance tests were not being given sufficient supervisory attention. The quarterly performance test should be performed in a more timely manner.

Procedure 1632.021, "TLD Calibration and Performance Certification," Revision 3, dated December 22, 1982, states in paragraph 11.4.1, "Upon completion of the performance test for the forth quarter of the current calendar year, an annual performance test should be made." The annual performance test utilizes the data from the four quarterly performance tests. At the time of this inspection the annual performance test for 1983 had not been completed. This is considered a violation of TS, Sections 6.10 for Unit 1 and 6.11 for Unit 2 (313/8409-01; 369/8409-01).

The NRC inspector noted in Emergency Procedure 1903.70, "Russellville Fire Department," Revision 1, February 5, 1982, that the fire department would be met by an individual qualified in HP. The procedure did not: specify that personnel monitoring devices should be furnished to each fireman (see NUREG 0654, Section II.K.3.a); reference the station procedure for issuance of TLDs; or provide guidance for bioassay, whole body counting, after the emergency is downgraded. A licensee representative stated that this procedure would be reviewed and appropriate corrective action taken.

The NRC inspector expressed concern to licensee representatives that Emergency Procedure 1903.33, "Re-Entry Guidelines," Revision 0, September 6, 1980, stated emergency exposure limits specified in the National Council of Radiation Protection, Publication 39, "Basic Radiation Protection Criteria." The NRC provides guidance for radiological exposure control in NUREG-0654, Section II.K.1, "Each licensee shall establish onsite exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides (EPA 520/1-75/001)." The recommended protective action guides for emergency team members are sumarized in Table 5.1 of EPA 520/1-75/001. The licensee stated that the station emergency plan was under review and that procedures would be revised to address the lower EPA exposure limits.

6. Internal Exposure Control and Assessment

The NRC inspector reviewed the licensee's internal exposure control and assessment program to determine compliance with 10 CFR Part 20.103 and the recommendations of RGs 8.2, 8.7, 8.8, 8.9, 8.10, 8.15, 8.20, and 8.26 and ANSI Standards N13.1-1969 and N343-1978.

The NRC inspector reviewed procedures, representative records for the air sampling program, whole body counting respiratory protection program, and interviewed personnel to determine the effectiveness of the program.

The NRC inspector discussed with licensee representatives the inspection and testing of portable air cleaning systems which incorporate High Efficiency Particulate Air (HEPA) filters. The licensee stated that these systems, in addition to vacuum cleaners with HEPA filters, were to be tested using Diocrylphthalate (DOP) and that provisions have been made to purchase a DOP aerosol generator and particulate detection unit. New procedures would be written and/or existing procedures revised to include the DOP testing required.

The NRC inspector stated that the individual responsible for performing this testing would have a better understanding of the filter testing and capability to more accurately interpret the results if the individual received formal training on in-place filter testing.

The NRC inspector reviewed the respiratory equipment used for both normal and emergency conditions, the equipment accessibility, spare air bottles,

station compressor for recharging air bottles, and monthly air purity analyses performed on the breathing air systems, instrument air systems, and ECC breathing air system.

No violations or deviations were identified.

7. Maintaining Occupational Exposures ALARA

The NRC inspector reviewed the licensee's ALARA Program, selected quarterly ALARA activities reports, and the 1983 annual radiation exposure report.

The licensee had projected a total man-rem exposure of 1486 for 1983 but was able to keep exposures down to 1313 man-rem. These exposure reduction goals are established on a quarterly and annual total for each working group. The annual projection (goal) for 1984 is 1033 man-rem which is comprised of the following organizational goals: operations, 48 man-rem; maintenance, 313 man-rem; engineering/technical support, 663 man-rem; administrative, 5 man-rem; quality control, 3 man-rem; and special projects, 1 man-rem. This includes the March 1984 mid-cycle outage for Unit 1, the October 1984 mid-cycle outage for Unit 2, and November 1984 refueling outage for Unit 1.

The NRC inspector reviewed the annual radiation exposure report furnished to the NRC as required by the TS. The NRC inspector noted that the man-rem total was listed as 1220.378 for 1983 and not 1313 man-rem as listed in the ALARA report. The NRC inspector discussed with licensee representatives the reason for the two different totals. The licensee stated that the quarterly reports contain data taken from the radiation work permits (RWPs) which are tracked daily with SRD results and TLDs are processed once a month or quarter as needed. National man-rem comparisons and 1983 and 1984 summaries for jobs that exceeded five man-rem are shown in Attachments 1, 2, and 3.

Attachment No. 1 provides a comparison of ANO's man-rem expenditure performance when compared to national single reactor averages for the years 1979 through 1983. This data shows that ANO had been consistently below national averages when normalized to a single reactor performance except for 1983.

Attachment No. 2 provides a comparison of ANO's refueling outage expenditure of man-rem for 1983. These outages overlapped the years of 1982 and 1984. Job evolutions requiring 5 man-rem or more are listed in the table.

8. Control of Radioactive Materials and Contamination, Surveys, and Monitoring

The NRC inspector reviewed the implementation of the licensee's program for control of radioactive materials and contamination, surveys, and monitoring for compliance with station procedures.

a. Portable Instrumentation

The NRC inspector reviewed the licensee's procedures, calibration, and operation of radiation protection instrumentation use for both routine and emergency operations against the requirements of the ANO TS and recommendations of RGs 8.4 and 8.25 and ANSI Standards N13.1-1969 and N323-1978.

The NRC inspector reviewed the quarterly inspection checklists for emergency monitoring and communications equipment and verified by visual inspection that the equipment was present and calibrations were current.

b. Protective Clothing

The NRC inspector reviewed the licensee's Procedures 1612.004, "Anti-C Requirements," Revision 4, June 7, 1983, and 1622.033, "Anti-C Laundry Handling and Monitoring Procedure," Revision 2, January 7, 1983, and observed the implementation of these requirements.

The licensee had sufficient supplies of protective clothing and equipment on hand to support normal and outage condition demands.

c. Radioactive Materials and Contamination Control

The NRC inspector reviewed the licensee's radioactive material and contamination control program to determine compliance with following Station Procedures:

1603.007, "Control of Radioactive Material," Revision 6, March 28, 1984

1612.009, "Radioactive Spills," Revision 0, October 18, 1982

1622.008, "Marking and Handling of Radioactive Materials and Equipment," Revision 4, PC-1, September 21, 1983

1622.010, "Personnel Decontamination," Revision 5, August 30, 1983.

The licensee had made improvement in the area of skin contamination incidents during 1983. A total of 567 incidents was recorded which is greater than a 20 percent reduction from 1982. The ALARA coordinator maintains a listing of individual, work group, type of protective clothing worn, and probable cause for each incident. During the period of January 1, 1984, through April 4, 1984, there were 96 recorded incidents; 23 for non-outage work, 12 for the Unit 2 outage, and 61 for Unit 1 outage work. Contractor personnel account

for a majority of these incidents of skin contamination. The licensee started, on a trial basis, having individuals who became contaminated fill out a questionnaire which will assist in determining the cause of the incident. This questionnaire will then be used to identify program weaknesses and additional corrective actions to be taken.

d. Surveys

The NRC inspector reviewed selective radiation, contamination, and airborne surveys conducted by the licensee for compliance with Procedures 1622.001, "Radiological Surveys and Documentation," Revision 2, August 27, 1982, and 1622.002, "Radiological Evaluations and Survey Requirements," Revision 5, PC-1, November 16, 1983, for both units and other surveys to support work being performed on RWPs.

The NRC inspector noted that the licensee routinely performs a weekly survey of the onsite landfill for gamma radiation and the incinerator for both gamma radiation and transferable contamination.

No violations or deviations were identified.

9. Facilities and Equipment

The NRC inspector reviewed the licensee's facilities and equipment provided to implement the radiation protection program. Those facilities reviewed included: HP office areas; equipment storage areas; change rooms for both station and support personnel; medical (first aid) facilities; control points to the radiologically controlled areas; instrument calibration, cleaning, repair, and decontamination areas; equipment decontamination areas; and personnel decontamination area.

The NRC inspector noted that the licensee did not have separate decontamination facilities for female employees. The licensee stated that HP personnel would provide for privacy control when females are required to use the decontamination facilities.

No violations or deviations were identified.

10. Audits

The NRC inspector reviewed licensee audits conducted on radiation protection activities during the period January 1, 1983, through March 30, 1984.

Audit SQA-1466 was conducted between the period April 26, 1983, through July 8, 1983. The audit was a procedural compliance type of audit conducted by a quality assurance engineer. Audit SQA-1504 dated October 26, 1983, was conducted as part of the station quality assurance

program by members of the corporate staff including the corporate health physicist. The major areas of review were: contents and adequacy of the radiation protection training program, respiratory equipment inspection program, decontamination practices, air sampling and survey practices, and procedural program effectiveness and record keeping. The NRC inspector noted that Audit SQA-1504 appeared to be a detailed review of those areas audited.

The NRC inspector reviewed the licensee's Audit Procedures: QAA-3, "Preparation and Issue of QA Documents," Revision 2, July 29, 1983; QAA-6, "Quality Assurance Audits," Revision 1, July 29, 1983; and QAA-9, "Corrective Action," Revision 1, July 29, 1983. These procedures establish a schedule for the audits, the development of an audit checklist, distribution of audit reports and findings, and resolution of disagreements for audit findings.

The NRC inspector reviewed the following audit procedures which address radiation protection activities:

QAP-3, "Health Physics," Revision 1, August 3, 1983
QAP-12, "Radwaste Management," Revision 0, February 17, 1981
QAP-13, "Emergency Planning," Revision 2, September 15, 1983
QAP-15, "Control of Measuring and Test Equipment," Revision 0, April 2, 1982
QAP-17, "Environmental Monitoring," Revision 0, March 20, 1981

The NRC inspector expressed concern that the quality assurance procedures, specifically QAP-3, appear to be written in a general manner and did not incorporate all the necessary reference material needed to prepare a detailed audit checklist that would contain all regulatory requirements. The NRC inspector discussed with licensee representatives the necessary references and additional references which contained industry standards and recommenations. The licensee stated they would review these references and procedures.

No violations or deviations were identified.

11. Exit Interview

The NRC inspector met with licensee representatives and the NRC resident inspector denoted in paragraph 1 at the conclusion of the inspection on April 6, 1984. The NRC inspector summarized the scope and findings of the inspection as presented in this report.

ATTACHMENT NO. 1

Comparison of ANO's Annual Man-Rem Expenditure to
National Single Reactor Performance

Year	1979	1980	1981	1982	1983
National LWR* Average	593	791	773	705	
National PWR* Average	510	578	652	578	550
ANO-Unit 1 & 2 (PWR) Average	369**	342**	551	401	610

*Legend
PWR - Pressurized Water Reactor
LWR - Light Water Reactors (includes PWRs and boiling water records)

**Only Unit 1 man-rem expenditure reported 1979 and 1980.

ATTACHMENT NO. 2

Table 3

Comparison of ANO's Refueling Outage Man-Rem Expenditures

Job Description	UNIT 1 1983	UNIT 1 Total	UNIT 2 1983	UNIT 2 Total
Auxiliary Building Total	67.773	87.897	25.497	25.801
Breathing air system	6.280	6.280		
Inspection and tours	5.227	13.257	2.365	2.365
Routine mechanical maintenance	7.717	8.902	4.929	4.984
Service waste system	22.313	22.885	1.705	1.705
Miscellaneous work	9.265	16.119	3.748	3.748
Fire barriers			7.084	7.220
Reactor Building Total	305.436	393.641	40.194	43.585
Breathing air system	13.510	18.640		
Cables and conduit	4.171	6.381	0.375	0.465
Electrical maintenance	3.385	7.497	2.865	2.985
High-point vents	22.982	37.322		
I & C maintenance	5.760	7.635	2.805	2.930
IS1 inspection	16.200	33.135	4.519	4.519
Inspections and tours	32.475	43.044	2.995	2.995
Mehanical maintenance	10.125	12.150	7.050	7.460
Misc. scaffolding & insulation	35.015	53.298	0.615	0.615
Misc. work	23.507	26.288		
"A" RCP maintenance	3.605	6.535		
RCP general	54.210	54.210		
Emergency feedwater	69.776	72.551		
2CV 2060 valve			6.945	8.645
Reactor Vessel & Refueling Operations Total	93.775	139.172	39.188	60.047
Aris tool	1.680	6.289		
Incore instruments	.740	1.820	10.115	13.570
Reactor head	20.225	23.990	3.700	11.805
CRD's	13.450	22.275		
CRDM flange gasket	21.865	21.865		
Vessel refueling operation	6.105	7.985	7.046	9.130
Vessel plenum work	4.435	5.275		
Vessel stud work	12.795	21.843	11.863	17.516
Termal shield bolt replacement	3.505	7.915		

Job Description	UNIT 1 1983	UNIT 1 Total	UNIT 2 1983	UNIT 2 Total
Steam Generator Total	534.999	560.050	27.636	27.811
Eddy current testing	14.630	20.435	7.660	7.660
Heat treatment level taps	15.550	21.595		
Insulation removal & replace	37.236	48.867		
Manway removal & replace	11.665	13.070	6.855	7.020
Misc. work	7.135	7.200	1.015	1.025
Tube plugging	413.331	413.331		
Tube pulling	27.615	27.615		
Tube sheet vent plugging	5.615	5.615		
Sludge lancing			8.971	8.971
Pressurizer Total	33.725	36.495	0.950	1.255
Insulation remove & replace	8.540	11.060		
Valves, cables, & conduit	24.815	25.065		
Decontamination & Housekeeping Total	31.325	43.170	8.175	9.785
Reactor bldg.	31.325	43.105	6.336	7.946
Health Physics Support Total	29.610	37.651	11.224	12.266
Reactor bldg.	27.615	35.116		
Radwaste Operation Total	2.787	7.897	2.389	2.579
Resin/Filter transfers	1.187	5.252		
Miscellaneous Operations Total	2.480	3.198	1.297	1.327
Outage Totals	1103.780	1313.396	159.352	188.772

Unit 1
836 MWe B&W Reactor
Outage Period 11/9/82 to 6/15/83

Unit 2
858 MWe CE Reactor
Outage Period 10/5/83 to 2/1/84

ATTACHMENT NO. 3

The licensee had expended the following man-rem in the performance of activities relating to the March 1984 mid-cycle outage and Unit 2 operations.

ACTIVITY	1984 EXPOSURE EXPENDED (MAN-REM)
Remove/replace snubbers	6.400
Bubble test/eddy current S/G-A	5.822
Mark/plug tubes S/G A top	23.680
Mark/plub tubes S/B B lower	30.533
Mark/plug tubes S/G top	23.343
Mark/plug tubes S/G B lower	16.933
Tube pull and removal S/G A	7.408

NRC FORM 766
(11-81)
IE MC 0535

U.S. NUCLEAR REGULATORY COMMISSION

INSPECTOR'S REPORT

Office of Inspection and Enforcement

PRINCIPAL INSPECTOR (Name last, first, and middle initial): BAER, RONALD E

REVIEWER: BLAINE MURRAY

INSPECTORS:

LICENSEE/VENDOR	TRANSACTION TYPE	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)	REPORT NO.	REPORT SEQ.	NEXT INSPEC. DATE MO.	NEXT INSPEC. DATE YR.
ARKANSAS POWER & LIGHT CO	X I – INSERT	050003 13	84 07	A		
	M – MODIFY	050003 68	84 09	B		
	D – DELETE			C		
	R – REPLACE			D		

PERIOD OF INVESTIGATION/INSPECTION FROM MO.	FROM DAY	FROM YR.	TO MO.	TO DAY	TO YR.	INSPECTION PERFORMED BY	ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See IEMC 0530 "Manpower Reporting – Weekly Manpower Reporting" for code.) REGION	DIVISION	BRANCH
03	26	84	04	06	84	X 1 – REGIONAL OFFICE STAFF; 2 – RESIDENT INSPECTOR; 3 – PERFORMANCE APPRAISAL TEAM; OTHER	4	B	A

REGIONAL ACTION (Check one box only)	TYPE OF ACTIVITY CONDUCTED (Check one box only)			
1 – NRC FORM 591	X 02 – SAFETY	06 – MGMT. VISIT	10 – PLANT SEC.	14 – INQUIRY
X 2 – REGIONAL OFFICE LETTER	03 – INCIDENT	07 – SPECIAL	11 – INVENT. VER.	15 – INVESTIGATION
	04 – ENFORCEMENT	08 – VENDOR	12 – SHIPMENT/EXPORT	
	05 – MGMT. AUDIT	09 – MAT. ACCT.	13 – IMPORT	

INSPECTION/INVESTIGATION FINDINGS (Check one box only) A	B	C	D	TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS A	B	C	D	ENFORCEMENT CONFERENCE HELD A	B	C	D	REPORT CONTAIN 2.790 INFORMATION A	B	C	D	LETTER OR REPORT TRANSMITTAL DATE: NRC FORM 591 OR REG LETTER ISSUED MO.	DAY	YR.	REPORT SENT TO HQ. FOR ACTION MO.	DAY	YR.
1 – CLEAR																					
✓ 2 – VIOLATION	X			01	01											MAY 10 1984					
3 – DEVIATION																					
4 – VIOLATION & DEVIATION																					

1 – YES

MODULE INFORMATION

REC ORD TYPE	MODULE NUMBER INSP NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	SEQ.*	PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL
B	05	93	52	28	B	A		15	70	0				
						B		15	70	0				
						C								
						D								
B	05	93	72	28	B	A		13	70	0				
						B		12	70	0				
						C								
						D								
B	05	93	72	48	B	A		20	50	0				
						B								
						C								
						D								
B	05	93	52	78	B	A		15	70	0				
						B		15	70	0				
						C								
						D								

REC ORD TYPE	MODULE NUMBER INSP NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	SEQ.*	PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL
B	05	93	52	28	B	A		15	70	0				
						B		15	70	0				
						C								
						D								
B	05	93	72	28	B	A		13	70	0				
						B		12	70	0				
						C								
						D								
B	05	93	72	48	B	A		20	50	0				
						B								
						C								
						D								
B	05	93	52	78	B	A		15	70	0				
						B		15	70	0				
						C								
						D								

* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION

CARRIED OVER ON NEXT PAGE

NRC FORM 766 (11-81) IE MC 0536

U.S. NUCLEAR REGULATORY COMMISSION

INSPECTOR'S REPORT

Office of Inspection and Enforcement

PRINCIPAL INSPECTOR (Name, last, first, and middle initial): BAER, RONALD E

REVIEWER:

INSPECTORS:

LICENSEE/VENDOR	TRANSACTION TYPE	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)	REPORT NO	REPORT SEQ.	NEXT INSPEC. DATE MO.	NEXT INSPEC. DATE YR.
	I – INSERT	0500031 3	8409	A		
	M – MODIFY	0500036 8	8409	B		
	D – DELETE			C		
	R – REPLACE			D		

PERIOD OF INVESTIGATION/INSPECTION FROM MO.	FROM DAY	FROM YR.	TO MO.	TO DAY	TO YR.	INSPECTION PERFORMED BY	ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See IEMC 0530 "Manpower Reporting—Weekly Manpower Reporting" for code.) REGION	DIVISION	BRANCH
						1 – REGIONAL OFFICE STAFF 2 – RESIDENT INSPECTOR 3 – PERFORMANCE APPRAISAL TEAM OTHER			

REGIONAL ACTION (Check one box only)
- 1 – NRC FORM 591
- 2 – REGIONAL OFFICE LETTER

TYPE OF ACTIVITY CONDUCTED (Check one box only)
- 02 – SAFETY
- 03 – INCIDENT
- 04 – ENFORCEMENT
- 05 – MGMT. AUDIT
- 06 – MGMT. VISIT
- 07 – SPECIAL
- 08 – VENDOR
- 09 – MAT. ACCT.
- 10 – PLANT SEC.
- 11 – INVENT. VER.
- 12 – SHIPMENT/EXPORT
- 13 – IMPORT
- 14 – INQUIRY
- 15 – INVESTIGATION

INSPECTION/INVESTIGATION FINDINGS (Check one box only)

A	B	C	D	
				1 – CLEAR
				2 – VIOLATION
				3 – DEVIATION
				4 – VIOLATION & DEVIATION

TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS A	B	C	D	ENFORCEMENT CONFERENCE HELD A	B	C	D	REPORT CONTAIN 2.790 INFORMATION A	B	C	D	LETTER OR REPORT TRANSMITTAL DATE: NRC FORM 591 OR REG. LETTER ISSUED MO.	DAY	YR.	REPORT SENT TO HQ. FOR ACTION MO.	DAY	YR.
												MAY	10	1984			

1 – YES

MODULE INFORMATION

REC ORD	MODULE NUMBER INSP TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	SEQ.*	PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL
B	9	5	9	3	7	2	A		3	70	0				
							B		3	70	0				
							C								
							D								
B	1	5	9	3	5	2	A		4	50	0				
							B		4	50	0				
							C								
							D								
B	1	5	8	3	7	2	A		3	70	0				
							B		3	70	0				
							C								
							D								
B	1	5	9	3	5	2	A		4	50	0				
							B		4	50	0				
							C								
							D								

* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION

MODULE INFORMATION

REC ORD	MODULE NUMBER INSP TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	SEQ.*	PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL
B	3	5	9	3	7	2	A		3	70	0				
							B		3	70	0				
							C								
							D								
B	1	5	9	3	5	2	A		1	50					
							B		1	50					
							C								
							D								
B	1	5	9	3	7	2	A		1	70	0				
							B		1	70	0				
							C								
							D								
B	1	5	3	0	7	0	A		1						
							B								
							C								
							D								

NRC FORM 766 A
(11-81)
IE MC 0535

INSPECTOR'S REPORT
(Continuation)
Office of Inspection and Enforcement

DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)	REPORT NO	SEQ	MODULE NUMBER	VIOLATION SEVERITY OR DEVIATION D	SITE RELATED
05000313	84009	A	IE35214B	1 2 3 4 5 6 X	X A C
05000368	84009	B			X B D
		C			
		D		27	28

VIOLATION OR DEVIATION (Enter up to 2400 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit lines to 50 characters each.)

1. Procedure Compliance

Both Unit 1 (50-313) Technical Specification 6.10 and Unit 2 (50-368) Technical Specification 6.11, "Radiation Protection Program," require that: "Procedures for personnel radiation protection shall be prepared . . . and adhered to for all operations involving . . . exposure."

Additionally, ANO Health Physics Operating Procedure 1632.021, "TLD Calibration and Performance Certification," Revision 3, requires that upon completion of the performance test for the fourth quarter of the current calendar year, an annual performance test should be made.

Contrary to the above, the fourth quarter performance test was completed on November 21, 1983, and as of April 6, 1984, the annual performance test had not been made.

(313/8409-01; 368/8409-01)

This is a Severity Level V Violation. (Supplement IV) ~~(313/8409-01) and~~

ATTACHMENT B

OPEN ACTION ITEMS LIST

Date: _____

Docket No: 50-313
(8)

Type Code:

A=Allegation	M=Miscellaneous
B=Bulletin	O=Open Item
C=Circular	R=Part 21 Report
D=Deviation	T=Temporary Instructions
E=50.55(e)	U=Unresolved Item
L=LER	V=Violation

Note - Max characters allowed for each entry shown in (1)

1	2	3	4	5	6	7	8
Type Item (1)	Item No. (8)	Report Paragraph (6)	Responsible Section (4)	Module (7)	Description (186)	Update/Closeout Report (30)	Status Code (1)
O	8909-02	3	TRP	83522	USAR ORGANIZATIONAL CHART		
V	8903-01	5	TRP	83529	PROCEDURE COMPLIANCE - TLD RECORDS		

ATTACHMENT B

OPEN ACTION ITEMS LIST

Date: _____

Docket No: 50-368
(8)

Type Code:

A=Allegation	M=Miscellaneous
B=Bulletin	O=Open Item
C=Circular	R=Part 21 Report
D=Deviation	T=Temporary Instructions
E=50.55(e)	U=Unresolved Item
L=LER	V=Violation

Note - Max characters allowed for each entry shown in (1)

1	2	3	4	5	6	7	8
Type Item (1)	Item No. (8)	Report Paragraph (6)	Responsible Section (4)	Module (7)	Description (186)	Update/Closeout Report (30)	Status Code (1)
O	8409-02	3	TRP	83522	USAR ORGANIZATIONAL CHART		
V	8409-01	5	TRP	83524	PROCEDURES COMPLIANCE - TRD RECORDS		