January 10, 2003

MEMORANDUM TO: Anton Vegel, Chief
Reactor Projects Branch 6
Division of Reactor Projects

FROM: Wayne Slawinski, Acting Chief ***/RA/***
Plant Support Branch
Division of Reactor Safety

SUBJECT: D. C. COOK NUCLEAR POWER PLANT
DRS INPUT TO INTEGRATED REPORT 50-315/02-09;
50-316/02-09

Attached is the report input for D. C. Cook Nuclear Power Plant, Inspection Report 50-315/02-09; 50-316/02-09. This input provides the results of a recent inspection into aspects of the licensee's Occupational Radiation Safety Program. The inspection focused on the licensee's Radiological Access Control and Radiation Monitoring Instrumentation and Protective Equipment programs, both under the occupational radiation safety cornerstone. Also, the performance indicator for the Barrier Integrity cornerstone (i.e., Reactor Coolant System, Specific Activity) was verified. I have reviewed this input and have determined it is ready for distribution to the licensee and dissemination to the public.

After your concurrence, please return this hard copy to me and we will email the electronic version to you.

Attachment: Input to Inspection Report 50-315/02-09;
50-316/02-09

CONTACT: Ronald V. Schmitt, DRS
(630) 829-9718

DOCUMENT NAME: G:\DRS\ML030630823.wpd
To receive a copy of this document, indicate in the box: "**C**" = Copy without attachment/enclosure "**E**" = Copy with attachment/enclosure "**N**" = No copy

OFFICE	RIII		RIII		RIII			
NAME	RSchmitt:aa		WSlawinski		AVegel			
DATE	1/9/03		1/9/03		1/10/03			

OFFICIAL RECORD COPY

Cover Letter

__✓__ No input, no significant findings.
____ Input below, no color or green findings were identified.

Title page

Inspector: Ronald V. Schmitt, Radiation Specialist

SUMMARY OF FINDINGS

ADAMS boilerplate - Inspectable Area: Occupational Radiation Safety

Modify second paragraph as follows:

The baseline inspection was conducted by a regional radiation specialist inspector.

REPORT DETAILS

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walkdowns, Radiological Boundary Verifications, and Radiation Work Permit Reviews

a. Inspection Scope

The inspectors conducted walkdowns of the radiologically protected area to verify the adequacy of radiological area boundaries and postings. Specifically, the inspectors walked down radiologically significant work area boundaries (radiation, high and locked high radiation areas) in the Auxiliary Building, radwaste area, spent fuel pool/refuel floor, as well as the Unit 2 Containment. The inspectors performed confirmatory radiation surveys in selected portions of these areas to verify that these areas were properly posted and controlled in accordance with 10 CFR Part 20, licensee procedures, and Technical Specifications. The inspectors also examined the radiological conditions of work areas within those radiation, high and locked high radiation areas to assess the adequacy of licensee implemented contamination controls. Additionally, the inspectors reviewed radiation work permits (RWPs) for general tours, access to locked high radiation areas (LHRAs) for work on spent fuel pool (SFP) demineralizers, drumming room clean-up activities, an at power entry into Unit 1 for work on a reactor coolant pump; and for another at power entry into Unit 2 for work on the no.1 safety injection (SI) accumulator. The RWPs were evaluated for protective clothing requirements,

respiratory protection concerns, electronic dosimetry alarm set points, use of remote telemetry dosimetry, radiation protection (RP) hold points, and As-Low-As-Is-Reasonably-Achievable (ALARA) considerations, to verify that work instructions and controls had been adequately specified and that electronic dosimeter set points were in conformity with survey results.

b. Findings

No findings of significance were identified.

.2 Job-In-Progress Reviews, Observations of Radiation Worker Performance, and Radiation Protection Technician Proficiency

a. Inspection Scope

The inspectors observed selected portions of the following radiologically significant work activities performed during the inspection and evaluated the licensee's use of radiological controls:

- Unit 2, No.1 SI accumulator level indicator repair; and
- Preparations for SFP demineralizer work

The inspectors reviewed the pre-job briefing package for the work evolutions, reviewed the radiological requirements for the activities and assessed the licensee's performance with respect to those requirements. The inspectors reviewed survey records, including radiation, contamination, and airborne surveys, to verify that appropriate radiological controls were effectively utilized. The inspectors also reviewed in-process surveys and applicable postings and barricades to verify their accuracy. The inspectors observed radiation protection technician (RPT) and worker performance during the work evolution at the job sites to verify that the technicians and workers were aware of the significance of the radiological conditions in their workplace and RWP controls/limits, and that they were performing adequately given the radiological hazards present and the level of their training.

b. Findings

No findings of significance were identified.

.3 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed licensee Condition Reports (CRs) written since the last inspection (July 2002) to the date of the current inspection, which focused on access control to radiologically significant areas (i.e., problems concerning activities in HRAs, radiation protection technicians performance, and radiation worker practices). The inspectors also reviewed the recently revised "High, Locked High, and Very High Radiation Area Access" procedure, which addressed new requirements for specific

locking devices for these areas. The inspectors reviewed these documents to assess the licensee's ability to identify repetitive problems, contributing causes, and the extent of conditions, and then implement corrective actions in order to achieve lasting results.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation (71121.03)

.1 Walkdowns of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) and performed walkdowns of continuous air monitors in the Auxiliary Building, radwaste area, spent fuel pool/refuel floor, radioactive material building areas, and one area radiation monitor (ARM) in the Unit 2 Containment. Additionally, the inspectors examined a representative number of portable radiation survey instruments staged throughout the licensee's facility to verify that those instruments had current calibrations, were operable, and in good physical condition. The inspectors also reviewed the status of repair or troubleshooting activities associated with selected radiation monitoring instruments (i.e. small article monitors and portal monitors that had work request tags) to verify that instrumentation problems were being addressed in an appropriate and timely manner.

b. Findings

No findings of significance were identified.

.2 Calibration, Operability, and Alarm Set Points of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors examined radiological instrumentation associated with monitoring transient high and/or very high radiation areas to verify that the instrumentation was operating consistent with industry standards and in accordance with station procedures. Specifically, the inspectors assessed the operability of the following instrumentation:

- Unit 2, In-Core Instrumentation Room ARM

The inspectors reviewed the licensee's alarm set point for this specific ARM to verify that the set point was established consistent with the UFSAR, Technical Specifications, and the station's Emergency Plan.

The inspectors discussed surveillance practices with licensee personnel and reviewed calender year (CY) 2001 - 2002 calibration records and procedures for selected radiation monitors used for assessment of internal exposure. The inspectors also

reviewed calibration records and procedures for those instruments utilized for surveys of personnel and equipment prior to egress from the radiologically controlled area (RCA). These instruments included:

- AMS-4 Air Monitoring System;
- APTEC PMW-3 Personnel Monitor; and
- Gamma 40/60 Portal Monitor.

Additionally, the alarm set-points for these instruments were reviewed to verify that they were established at levels consistent with industry standards and regulatory guidance provided in Health Physics Positions no. 72 and no. 250 of NUREG/CR-5569.

The inspectors evaluated the calibration procedures and CY 2001 - 2002 calibration records for selected portable radiation survey instruments to verify that the had been properly calibrated consistent with the licensee's procedures. Specifically, the inspectors reviewed the calibrations of the following instruments:

- Emergency Plan designated RO-7 ion chamber; and
- Smart Radiation Monitor general area dose rate meter.

The inspectors also assessed periodic performance tests (PPTs) completed for selected portable radiation survey instruments to verify that the had been tested consistent with the licensee's procedures. Specifically, the inspectors observed the PPTs of the following instruments:

- Extender instruments; and
- RSO instruments.

b. Findings

No findings of significance were identified.

.3 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspectors observed RPTs performing in-field source checks of portable radiation survey instruments to verify that those source checks were adequately completed using appropriate radiation sources and station procedures. The inspectors assessed the RPTs use of radiation/contamination detection instruments as they provided radiological job coverage for risk significant work (e.g. the SI accumulator repair work in the Unit 2 Containment), as well as routine work, to ensure that the RPTs were utilizing the appropriate instruments. The inspectors monitored RPTs performing functional tests of selected contamination monitors, portal monitors, and small article monitors (i.e., for surveys of personnel and equipment prior to unconditional release from the RCA) to verify that they were source tested and calibrated as required by station procedures and industry standards.

b. Findings

No findings of significance were identified.

.4 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed CY 2001-2002 CRs that addressed radiation monitoring instrument deficiencies to determine if any significant radiological incidents involving instrument deficiencies had occurred. The inspectors examined the results of a self-assessment (i.e., the Summary Report for performance Assurance Audit PA-0206, "Radiation Protection") that focused on the licensee's CR database and several individual CRs related to radiation monitoring instrumentation generated during the current assessment period. The inspectors also interviewed plant staff and examined closed CRs to verify that radiological instrumentation related issues were adequately addressed by the licensee. The inspectors evaluated these documents to verify the licensee's ability to identify repetitive problems, contributing causes, extent of conditions, and the implementation of corrective actions to achieve lasting results.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed the licensee's assessment of its performance indicator (PI) for Barrier Integrity, Reactor Coolant System (RCS) Specific Activity. No reportable elements were identified by the licensee for 4th quarter of 2001,and the 1st, 2nd, 3rd quarters of 2002. The inspectors compared the licensee's data with CY 2001 and 2002 CRs to verify that there were no occurrences concerning the Barrier Integrity, RCS Specific Activity cornerstone. Additionally, the inspectors also observed staff chemistry technicians collecting RCS samples to verify that the technicians had complied with the applicable procedures during the collection and processing of the samples.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Interim Exit Meeting

- Access Control to Radiologically Significant Areas, Radiation Monitoring Instrumentation and Protective Equipment, and Performance Indicator Verification for RCS Specific Activity with Mr. J. Molden on December 6, 2002.

KEY POINTS OF CONTACT

Licensee
R. Hershberger, Chemistry Supervisor
B. Robinson, Radiation Protection Superintendent
M. Scarpello, Regulatory Assurance
D. Woods, Radiation/Environmental Manager

LIST OF DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings.

20S1 Access Control to Radiologically Significant Areas

CR 02217009; Modifications to Radiological Posting Program; dated August 5, 2002

CR 02226075; Unnecessary Locked High Radiation Areas; dated August 14, 2002

CR 02308023; Valve released to unrestricted area; dated November 4, 2002

CR 02337041; Improper receipt of package containing radioactive source; dated November 27, 2002

PMP-6010-RPP-003; High, Locked High, and Very High Radiation Area Access; Revision 11

PMP-6010-RPP-006; Radiation Work Permit Program; Revision 7a

RP 014-01; Total Effective Dose Equivalent Evaluation worksheet for work at 587' Drumming room clean-up, dated September 23, 2002

RP 014-01; Total Effective Dose Equivalent Evaluation worksheet for work on SFP Demineralizer High Pressure Spray of the Inlet Retention Element, dated October 23, 2002

RP 014-01; Total Effective Dose Equivalent Evaluation worksheet for Unit 2 at power entry to work on No. 1, SI Accumulator; dated November 8, 2002

RWP 020504; Restricted Area NRC Tours and Inspections; Revision 10

RWP 021016; Resin Sluice activities - Locked High Radiation Areas; Revision 6

RWP 021037; 617' Demin LHRA Work activities; Revision 3

RWP 021046; 587' Drumming Room activities; Revision 1

RWP 021052; Unit 2, At Power Entry; Revision 2

RWP 02-1037; Radiation Protection ALARA plan for work on SFP Demineralizer High Pressure Spray of the Inlet Retention Element; Revision 1

RWP 02-1046; Radiation Protection ALARA plan for work at 587' Drumming room clean-up; Revision 0

RWP 02-1052; Radiation Protection ALARA plan for work on RCP #11 and # 14; Revision 1

12-THP-6010-RPP-006; Radiation work Permit (RWP) Processing; Revision 17

12-THP-6010-RPP-401; Performance of Radiation and Contamination Surveys; Revision 10

12-THP-6010-RPP-418; Radiological Postings; Revision 9

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

CR 02246017; Foot and Hand monitor found out of service; dated September 3, 2002

CR 02249037; Instrument missing from work area; dated September 6, 2002

CR 02287056; Discrepencies between laboratory cross-check program; dated September 30, 2002

CR 02304023; Failure to follow procedural requirements for instrument accountability; dated October 31, 2002

PA-02-06; Performance Assurance Audit "Radiation Protection"; dated April 16, 2002

12-THP06010-RPI-500; Instrument Issue and Operation Testing; Revision 13a

12-THP06010-RPI-500; Instrument Issue and Operation Testing; Revision 13a; Data from Portal Monitor Operational Checks performed on December 5, 2002

12-THP06010-RPC.512; Calibration of the Eberline Smart Portable Survey Meter(s); Revision 5

12-THP06010-RPC.512; Calibration of the Eberline Smart Portable Survey Meter(s); Revision 5; Data sheet from December 3, 2002

12-THP06010-RPC-513; Calibration of the Eberline Model R0-7 Survey meter; Revision 2a

12-THP06010-RPC-513; Calibration of the Eberline Model R0-7 Survey meter; Revision 2a; Data sheet from December 3, 2002

ALARA Radiation Protection Daily Dose Report and Schedule; dated December 2, 2002

Alphabetical listing of stations radiation protection instrumentation

Blitz Team Bulletin; Weekly station performance bulletin; dated December 3, 2002

Calibration packages from a selection of station's radiation protection instruments; dated December 2001 to December 2002

Online Quality Control Schedule; dated November 27, 2002

Radiation Protection Instrument Use History Analysis forms; selections from #858-953; dated January 2002 to December 2002

Report of instruments due for calibration; due date of December 31, 2002

The Plan-It; Daily station performance bulletin; dated December 4, 2002

4OA1 Performance Indicator Verification

CR P-00-29181; Control Room Operability Evaluation, with subsequent lowering of Technical Specification for RCS Specific Activity; dated December 15, 1999 to August 13, 2002

CR 02019069; Exceeding limits for Hard Gammas in RCS Filtrate Isotopic mixture; dated January 19, 2002

CR 02219004; E-BAR determinations found to be slightly erroneous; dated August 6, 2002

PMP 7110.PIP.001; Regulatory Oversight Program Performance Indicators; Revision 1

PMP 7110.PIP.001; Regulatory Oversight Program Performance Indicators; Revision 1, Data Sheet 9, Reactor Coolant system Specific Activity; dated CY 2001, 4th Quarter through CY 2002, 3rd Quarter

12-THP-6020-INS-026; Gamma Spectrometry System; Revision 1a

12-THP-6020-CHM-101; Reactor Coolant System; Revision 14c

Administrative Technical Requirements Units 1 and 2, Reactor Coolant system, Supplemental Operational and Surveillance Requirements; Revision 18

Results of gamma spectrometry count of Units 1 and 2 RCS Specific Activity samples; dated December 4, 2002

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
ARM	Area Radiation Monitor
CR	Condition Report
CY	Calender Year
LHRA	Locked High Radiation Area
PPT	Periodic Performance Test
PI	Performance Indicator
RCA	Radiologically Controlled Area
RCS	Reactor Coolant System
RP	Radiation Protection
RPT	Radiation Protection Technician
RWP	Radiation Work Permit
SFP	Spent Fuel Pool
SI	Safety Injection
UFSAR	Updated Final Safety Analysis Report