

U. S. NUCLEAR REGULATORY COMMISSION  
REGION V

Report No. 50-397/87-24

Docket No. 50-397

License No. NPF-21

Licensee: Washington Public Power Supply System  
P. O. Box 968  
Richland, Washington 99352

Facility Name: Washington Nuclear Project No. 2

Inspection at: WNP-2, Benton County, Washington

Inspection Conducted: August 3-6, 1987

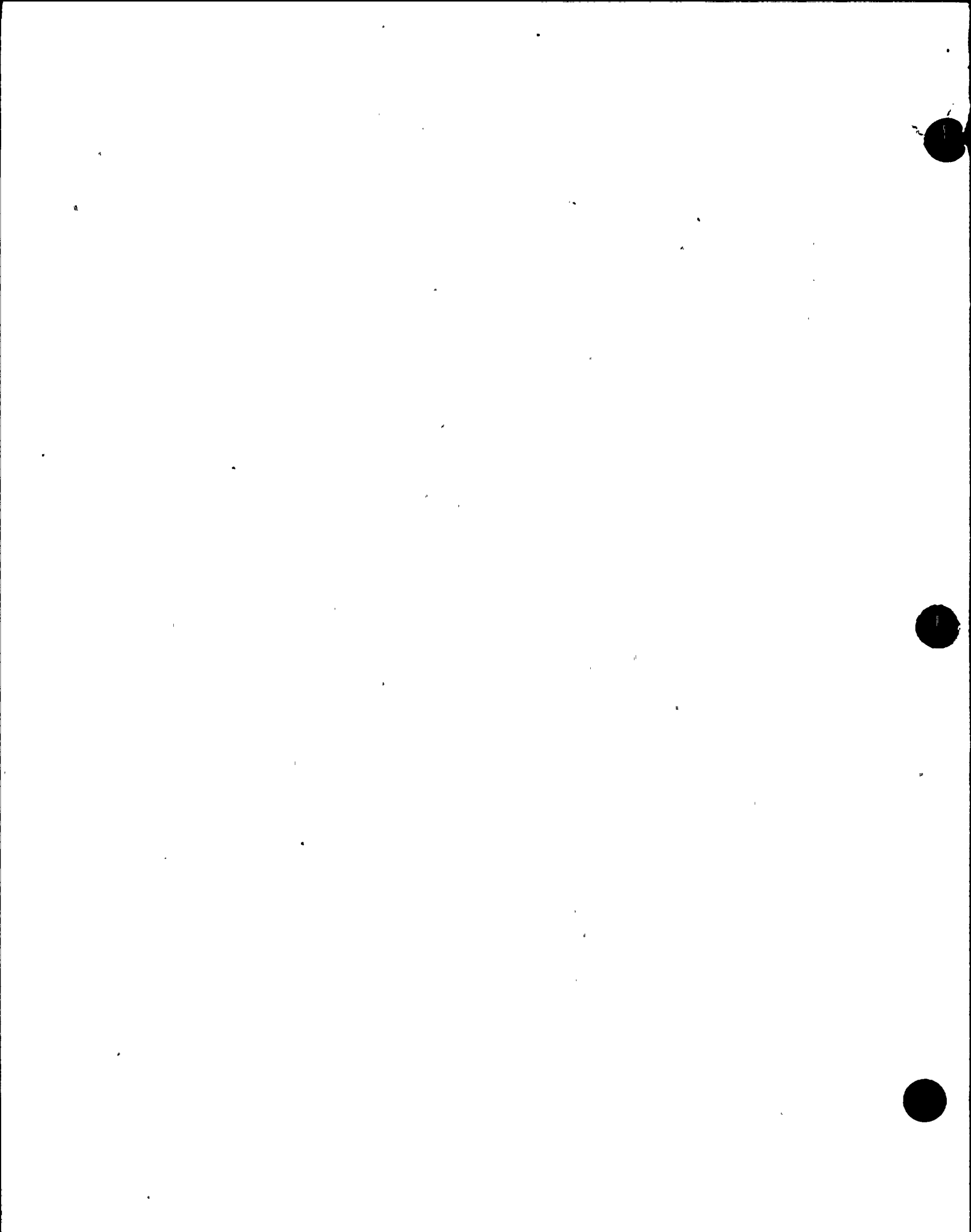
Inspectors:	<u>M. Cillis</u>	<u>5/31/87</u>
	M. Cillis, Senior Radiation Specialist	Date Signed
	<u>G. A. Brown</u>	<u>8/29/87</u>
	G. A. Brown, Emergency Preparedness Analyst	Date Signed
Approved by:	<u>G. P. Yuhas</u>	<u>9/1/87</u>
	G. P. Yuhas, Chief Facilities Radiological Protection Section	Date Signed

Summary:

Inspection on August 3-6, 1987 (Report No. 50-397/87-24)

Areas Inspected: Routine unannounced inspection by regionally based inspectors of receipt and transportation of radioactive materials, solid waste program, gaseous waste systems, followup items and a tour of the licensee's facility. Inspection modules 30703, 84524, 84722, 86721, and 92701 were addressed.

Results: Of the four areas addressed, a violation was identified in one area: failure to label a container of dry active waste in accordance with 10 CFR Part 20.203 (f)(1) and (2) (see paragraph 4).



## DETAILS

### 1). Persons Contacted

- \*C. M. Powers, Plant Manager
- \*J. W. Baker, Assistant Plant Manager
- \*R. G. Graybeal, Health Physics/Chemistry Manager
- \*V. E. Shockley, Health Physics/Radiochemistry Support Supervisor
- \*K. Smith, Radwaste Health Physicist
- \*L. Bradford, Health Physics Supervisor
- M. Valdez, Health Physics Foreman
- \*M. C. Bartlett, Plant QA Supervisor
- M. Irwin, Plant QC Supervisor
- F. Quin, Principal Specialist
- J. Allen, Assistant Health Physicis Supervisor
- \*P. C. Powell, Manager, Licensing
- \*C. Van Hoff, Sr., State Liaison
- J. Graziani, Q. A. Engineer
- M. Gant, Systems Engineer
- G. Oldfield, Senior Health Physicist

### b). U. S. Nuclear Regulatory Commission

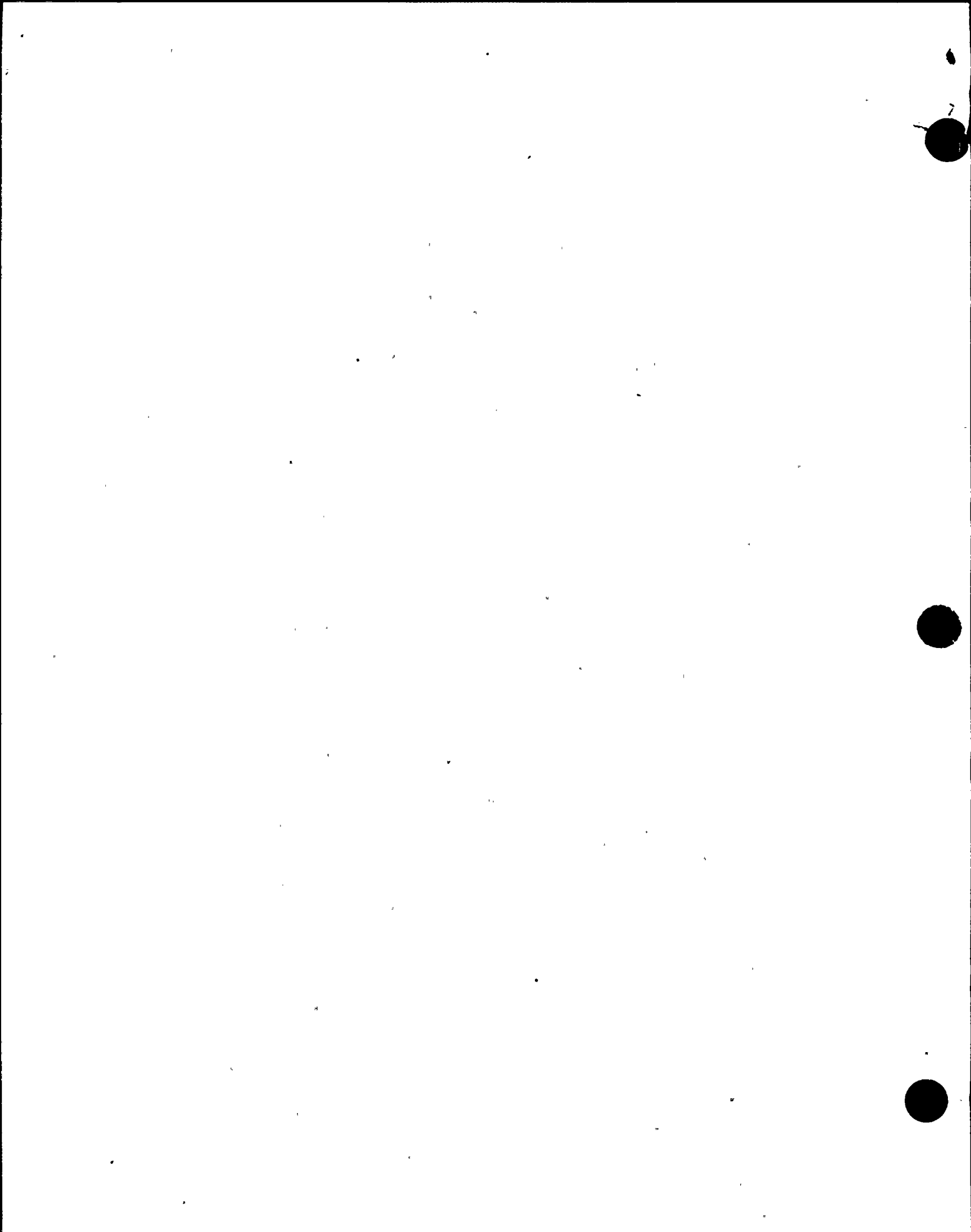
C. Bosted, Resident Inspector

### 2) Transportation Activities and Receipt of Radioactive Material

Licensee activities associated with the receipt and transportation of radioactive materials were examined for the purpose of determining compliance with:

- o 10 CFR Part 20.205, Procedures for Picking Up, Receiving, and Opening of Packages
- o 10 CFR Part 20.311, "Transfers for Disposal and Manifests"
- o 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste"
- o 10 CFR Part 71, "Packaging and Transportation of Radioactive Material"
- o Department of Transportation (DOT) Regulations prescribed in 49 CFR Parts 100-178, "Transportation"
- o Certificate of Compliances for NUPAC 14/210L and Model 10-142 shipping containers

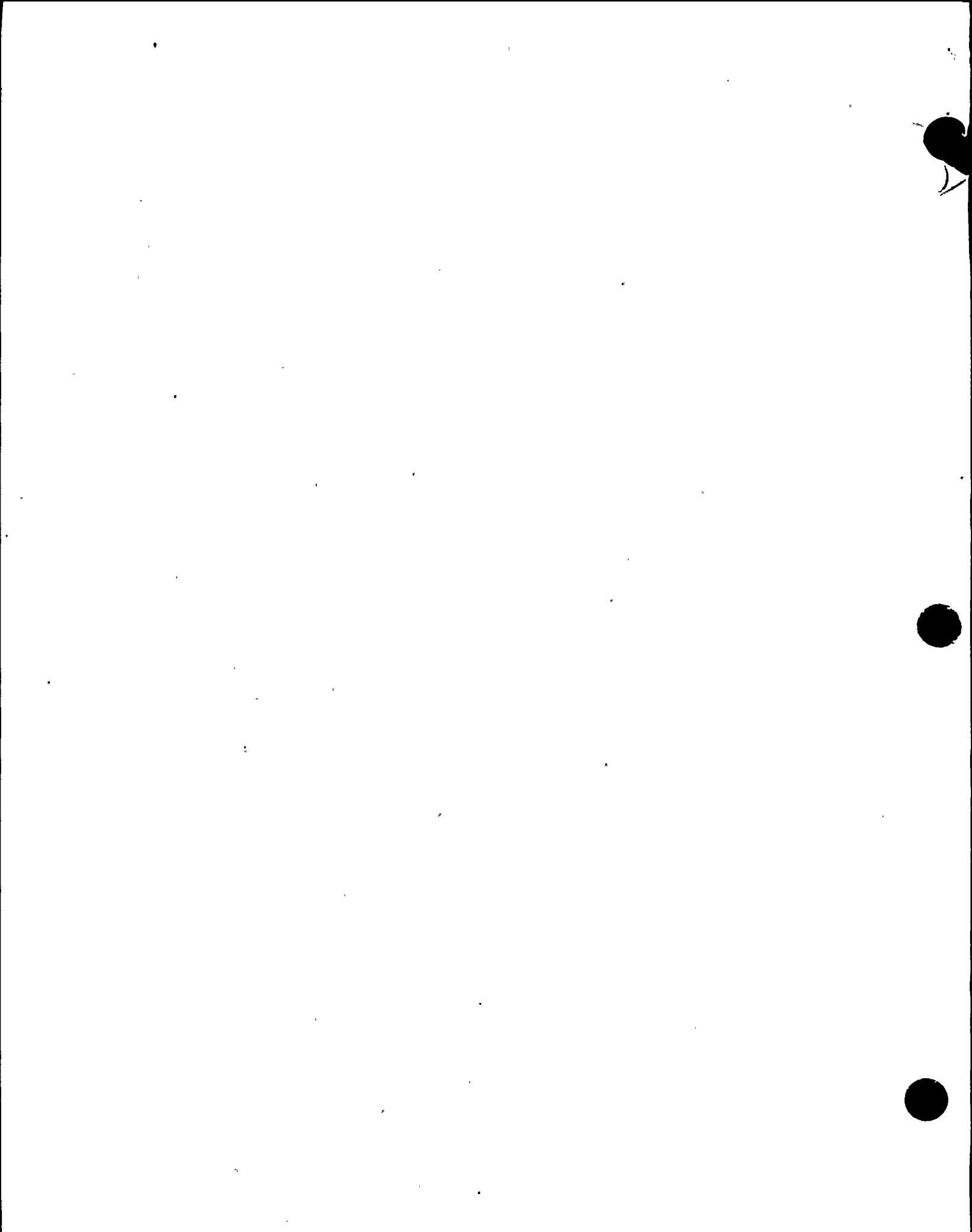
The examination included a review of the following procedures and records:



- | <u>Procedure No.</u> | <u>Title</u>                                  |
|----------------------|---|
| 1.12.1               | Radioactive Waste Management Program          |
| 1.12.2               | Radioactive Waste Process Control Program     |
| 1.12.3               | Contract (Vendor) Waste Processing            |
| 11.2.14.1            | Procurement of Material                       |
| 11.2.14.3            | Receipt of Radioactive Materials              |
| 11.2.23.2            | Radioactive Waste Classification              |
| 11.2.23.3            | Radioactive Material Shipping Names           |
| 11.2.23.4            | LSA Radioactive Material Shipments            |
| 11.2.23.6            | Shipping Other Than LSA Radioactive Materials |
- | <u>Audit/Surveillance Report No.</u> | <u>Subject</u>   |
|--------------------------------------|--|
| Audit Report 87-389                  | Packaging of radioactive waste   |
| Audit Report 87-395                  | Packaging of radioactive waste   |
| Surveillance Report 2-86-163         | Receiving, storage and transfer of radioactive material                                |
| Surveillance Report 2-86-164         | Storage and shipment of solid waste  |
| Surveillance Report 2-87-122         | Controlling quality of radioactive waste dewatering equipment by an offsite contractor |
- Offsite radioactive shipment records for 1986 and 1987.
- PCP procedures

The examination disclosed that the scope and depth of audits/surveillances were adequate to probe and assess programmatic weaknesses. The inspector noted that licensee audit findings were addressed promptly and the corrective actions appeared to be technically acceptable. The inspector concluded that the QA/QC program for radwaste management was in compliance with 10 CFR Part 20.311(d)(3).

The inspectors noted that the licensee currently ships resins in dewatered form in USA/A NRC certified containers. The shipments are typically classified as low specific activity (LSA) waste. The determinations of 10 CFR Part 71.87, "Routine Determinations" for multiple shipments requiring the use of NRC certified packaging and



records of the determinations are maintained in accordance with 10 CFR Part 71.91, "Records".

The licensee's program includes provisions for ensuring compliance with 10 CFR Part 20.311 and 10 CFR Part 61. The program is described in Region V Inspection Report 50-397/86-28. Procedures appear to provide adequate instructions for establishing waste classifications and characterization pursuant to 10 CFR Part 61.55 and 61.56.

During the period July 1, 1986 to June 30, 1987 the inspector noted that approximately  $1.25E+4$  cubic feet of waste, composed of 60% spent resins and 40% dry active waste, was shipped to the burial grounds for disposal. Also, no transportation incidents or lost shipments were identified between January 1986 and July 1987. The inspector concluded that the licensee's transportation activities for this inspection period were consistent with 10 CFR Part 20.311, 10 CFR Part 71 and 49 CFR Parts 100-178.

The review of records for radioactive materials that the licensee received since the previous inspection disclosed that activities were in compliance with 10 CFR Part 20.205.

The inspector noted that the licensee had recently purchased a computerized waste tracking system called WASTETRAK. The system performs the lengthy calculations required to meet shipping regulations and to generate shipping papers. In addition, the system provides for analyzing the same radioactive waste processing system database to perform engineering evaluations. Reports generated by this function assist management with operational support and planning. The WASTETRAK system also replaces the old manual method for calculating decay and isotope concentrations and provides the computing power necessary to perform shielding and dose calculations. The inspectors concluded that this addition should strengthen the waste processing program.

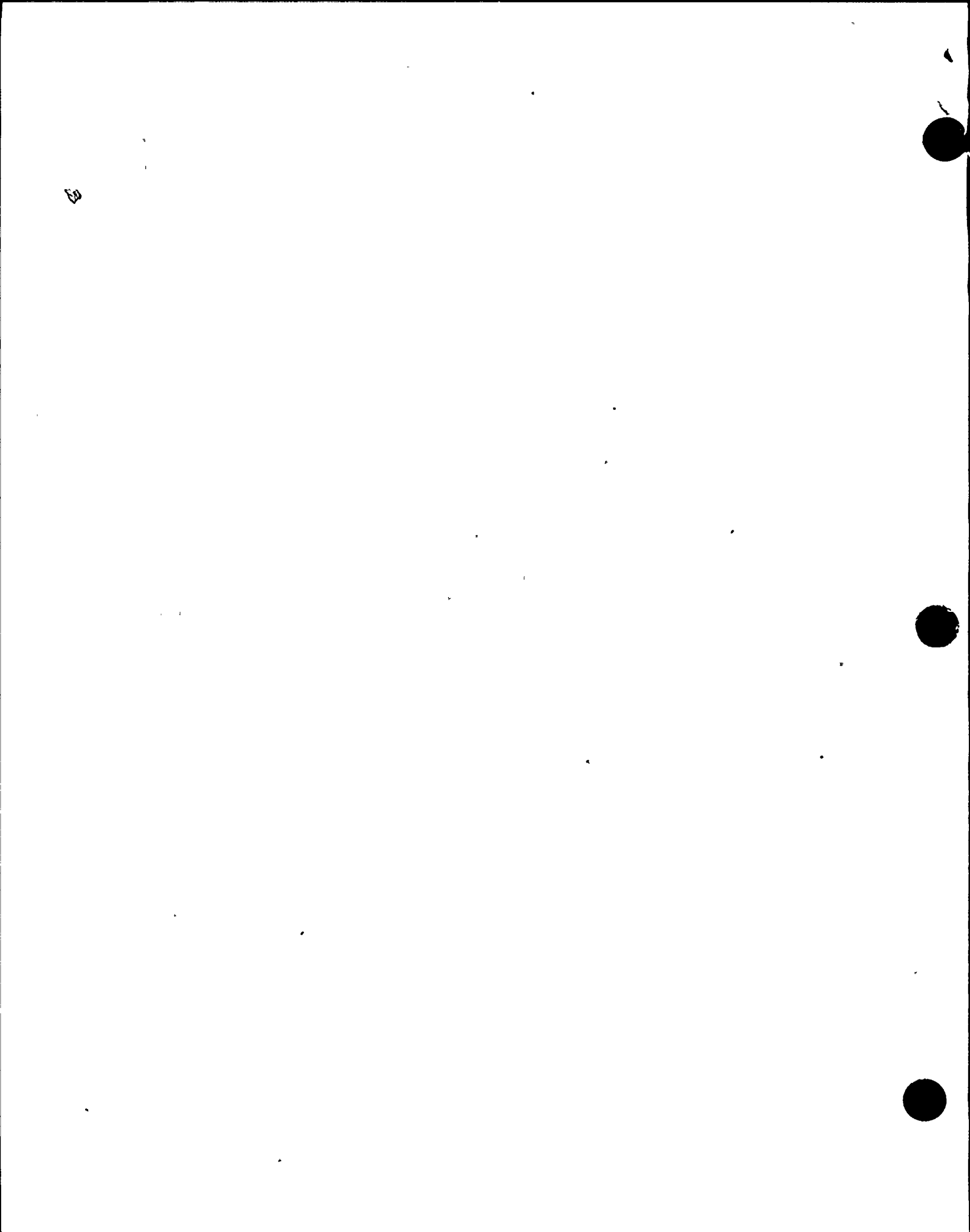
No violations or deviations were identified.

### 3) Solid Waste

The licensee's Radioactive Waste Management Program for assuring compliance with Technical Specifications, Section 3.11.3, "Solid Radioactive Waste" and Section 6.13, "Process Control Program" (PCP) was examined.

Procedures and QA audit/surveillances identified in paragraph 2, herein were reviewed, discussions were held with the licensee's staff, and a resin dewatering operation was observed during the inspection period.

PPM 1.12.1 states that an individual identified as the Radwaste Management Program Leader (RMPL) has overall responsibility for the technical management and coordination of the Radioactive Waste Management Program. The examination disclosed that the individual currently assigned (RMPL) had been reassigned to another position during the first quarter of 1986 leaving the RMPL's position vacant. The RMPL's position was still vacant at the time of this inspection. In the interim,





responsibilities of the RMPL had been unofficially assumed by the Radwaste Health Physicist and Health Physics/Chemistry Support Supervisor. The inspector brought this observation to the licensee's attention at the exit interview. The inspector emphasized the important role of the RMPL. The licensee's staff stated that the inspector's observation would be evaluated.

The inspection disclosed that the licensee's vendor-approved PCP program was consistent with TS, Section 6.13. Currently all resins processed under the vendor's program are dewatered. The dewatering procedures implemented by the vendor have been reviewed and approved by the licensee pursuant to TS, Section 6.8, "Procedures and Programs" requirements.

The licensee's procedures related to Management of Radwaste are reviewed for adequacy at least annually and/or whenever changes occur. The procedures appear to provide adequate guidelines for determining waste classification and characterization and for determination of the scaling factors for the plants waste streams.

The licensee's organization responsible for implementation of the Radioactive Waste Management has remained essentially the same as is described in paragraph 6 of Inspection Report 50-397/86-28. The licensee's staff informed the inspector that no changes had been made to the plant's radwaste processing systems since the previous inspection.

No violations or deviations were identified.

#### 4) Facility Tour

Tours of the Turbine, Radwaste and Reactor Buildings were conducted during the inspection with the licensee's staff on several occasions during the inspection. During the tours, independent radiation measurements were performed with an Eberline, Model RO-2 ion chamber survey meter, Serial Number 2694, that was due for calibration on October 21, 1987. The following observations were made:

- a) Portable instruments used for air sampling and radiation detection were in current calibration.
- b) Observed work practices were consistent with instructions provided on Radiation Work Permits and the ALARA concept as defined in 10 CFR Part 20.1(c).
- c) Posting of notices to workers were in compliance with 10 CFR Part 19.11 requirements.
- d) Plant cleanliness, except for the 501' level of the Reactor Building, was good.
- e) Except for item (f) below, the licensee's posting and labeling practices were in compliance with 10 CFR Part 20.203, "Caution Signs, Labels, Signals and Controls."

- f) On August 4, 1987, the inspector noted that Shipping container, number 88255, containing Low Specific Activity material for shipment to a burial ground was not labeled in accordance with the requirements prescribed in 10 CFR Part 20.203(f)(1). Part 20.203(f)(1) requires that each container of licensed material shall bear a durable, clearly visible label identifying the radioactive content. The container, which was packaged on July 24, 1987 was stored on the loading dock, just outside the southwest end of the Radwaste Building. The container contained quantities of radionuclides that were in excess of 10 CFR Part 20, Appendix C limits. The radionuclides and the quantities in the container were as follows:

<u>Radionuclide</u>	<u>Appendix C Limit Millicuries</u>	<u>Quantity in Container (Millicuries)</u>
Chromium-51	1	20.2
Cobalt-58	.010	5.22
Cobalt-60	.001	4.57
Zinc-65	.010	20.5
Zirconium-95	.010	1.54
Niobium-95	.010	1.79
Nickel-63	.010	0.299

Radiation measurements on contact with the container ranged from 3 millirem/hour (mrem/hr) to 80 mrem/hr. The container was located within an appropriately posted radiation area.

The above observation was brought to the attention of members of the licensee's staff accompanying the inspector. The licensee's staff took immediate action to label the container.

The inspector noted that several labels affixed on several other containers were not adhering to the containers surface too well. This was also brought to the licensee's attention.

The inspector also noted that a licensee internal audit had identified a similar problem earlier during the year at which time actions were taken to periodically inspect the containers for labeling.

The inspector informed the licensee that failure to label containers containing licensed material in excess of 10 CFR Part 20, Appendix C limits was a potential violation (87-24-01).

#### 5) Sealed Source Accountability and Leak Checks

An examination was conducted to determine if the licensee's control for the storage, accountability and testing of sealed sources was in compliance with Technical Specifications, Section 3.7.5.

The inspectors reviewed applicable procedures, such as:

PPM 7.4.7.5.2 Storage of Radioactive Material



PPM 11.2.14.3 Storage of Radioactive Material

RPI 12.5.2 Leak Testing of Radioactive Sources

The examination included a review of leak test survey results and of accountability records. This review disclosed that, while the licensee's control and testing of sealed sources were consistent with T.S., Section 3.7.5. The inspector observed that the procedures did not provide clear and concise guidance to assure continued compliance with the regulatory requirements. Specifically, the three procedures were not compatible and some of the instructions were open for interpretation. This observation was discussed with the Health Physics Supervisor at the exit interview.

No violations or deviations were identified.

6) Effluent Releases

Because the licensee appeared to take credit for an elevated release point in both the Final Safety Analysis Report (FSAR) and the Offsite Dose Calculation Manual (ODCM) when the facilities did not meet the criteria for elevated release points, the inspector reviewed the licensee's effluent release program to determine the actual method used for calculating releases.

The licensee states in the ODCM, "The elevated release duct is basically the Reactor Building stack..." and in the FSAR, "Gaseous radwastes are discharged through a reactor building elevated release point...." Regulatory Guide 1.3 states, however, that "Credit for an elevated release should be given only if the point of release is (1) more than two and one-half times the height of any structure close enough to affect the dispersion of the plume..." and "Elevated releases should be considered to be at a height equal to no more than the stack height." Since the licensee's reactor building stack is only a few feet above the reactor building, the licensee did not appear to meet the criteria of the Regulatory Guide.

The inspector reviewed documentation from both the primary and backup computer systems used for atmospheric release calculations and determined that the licensee used a "mixed mode" calculation based on a mixture of both ground and elevated release points in accordance with a procedure approved by the Office of Nuclear Reactor Regulations. The inspector concluded that the licensee did not take credit for an elevated release and this portion of the licensee's program was satisfactory.

No violations or deviations were identified.

7) Followup Items

The status of Information Notices (IN's) and inspector identified followup items were examined. The examination disclosed the following:

A). Information Notices

The inspectors verified that the licensee's staff had received the following Information Notices for review:

- ° IN-86-23, "Excessive Skin Exposure Due to Contamination with Hot Particles"
- ° IN-86-42, "Improper Maintenance of Radiation Monitoring Systems"
- ° IN-87-31, "Blocking, Bracing, and Securing of Radioactive Materials Packages in Transportation"

The licensee's staff were in the process of evaluating the IN's. IN 86-23, 86-42 and 87-31 are closed.

B). Followup Items

(Closed) Followup Item (86-14-06) The licensee's actions to seal the equipment access opening in the decontamination facility on the 467' level of the Radwaste Building was examined.

The examination disclosed that the licensee's staff had installed a piece of herculite taped over the opening to maintain the seal. The taped herculite cover is checked periodically to verify that the seal is maintained. This matter is closed (86-14-06).

(Closed) Followup Item (86-38-03) Inspection Report 50-397/86-38 identified a low flow alarm in the Radwaste Building's ventilation exhaust radiation monitor panel, WEA-SR-25. The iodine and particulate sampling cartridge was found to be misaligned and, as a result, air leakage into the sample holder was determined to be responsible for the low flow alarm. The inspector noted that the licensee had replaced the sample holders with newly designed units. Discussions with the licensee's staff disclosed that the new units had eliminated the air leakage problem. This matter is closed (86-38-03).

8) Exit Interview

The inspectors met with the individuals denoted in paragraph 1 at the conclusion of the inspection on August 6, 1987. The scope and findings of the inspection were summarized.

The potential violation discussed in paragraph 4 was brought to the licensee's attention.