UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

February 23, 2004

Framatome ANP
ATTN: Mr. Robert E. Link
Plant Manager
2101 Horn Rapids Road
Richland, Washington 99352

SUBJECT: NRC INSPECTION REPORT NO. 70-1257/2004-001

Dear Mr. Link:

This report refers to the inspection conducted from January 26-29, 2004, at the Framatome ANP facility in Richland, Washington. The purpose of the inspection was to determine whether activities authorized by the license were conducted in accordance with NRC requirements. At the conclusion of the inspection, the findings were discussed with those members of your staff identified in the report.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observation of activities in progress.

Within the scope of the inspection, violations or deviations were not identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this letter, please contact us.

Sincerely,

**/RA BY WILLIAM B. GLOERSEN**
**ACTING FOR/**

David A. Ayres, Chief
Fuel Facility Inspection Branch 1
Division of Fuel Facility Inspection

Docket No. 70-1257
License No. SNM-1227

Enclosure: (See Page 2)

Enclosure: NRC Inspection Report

cc w/encl:
Thomas Scott Wilkerson
Vice President, Operations
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Charles Perkins
Richland Operations Manager
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Donald W. Parker, Manager
Environmental, Health, Safety & Licensing
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Loren J. Maas, Manager
Licensing and Compliance
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Calvin D. Manning, Manager
Nuclear Criticality Safety
Framatome ANP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Washington Radiation Control
Program Director

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

| | |
|---|---|
| Docket No.: | 70-1257 |
| License No.: | SNM-1227 |
| Report No.: | 70-1257/2004-001 |
| Licensee: | Framatome ANP |
| Facility: | Richland Facility |
| Location: | Richland, Washington |
| Dates: | January 26-29, 2004 |
| Inspectors: | W. Britz, Fuel Facility Inspector<br>N. Rivera, Fuel Facility Inspector<br>C. Taylor, Health Physicist |
| Accompanied by: | D. Ayres, Chief, Fuel Facility Inspection Branch 1<br>M. Yoder, Nuclear Safety Intern, Headquarters |
| Approved by: | D. A. Ayres, Chief<br>Fuel Facility Inspection Branch 1<br>Division of Fuel Facility Inspection |

Enclosure

EXECUTIVE SUMMARY

Framatome ANP- Richland
NRC Inspection Report 70-1257/2004-001

This routine announced inspection focused on the observations and evaluation of the licensee's radiation protection, waste management, low-level radioactive waste storage, waste generator requirements, operator training/retraining and emergency preparedness areas. The inspection identified the following aspects of the licensee programs as outlined below:

Radiation Protection

- The external and internal exposure monitoring programs were implemented in a manner to maintain doses as low as reasonably achievable. Exposures were less than the occupational limits in 10 CFR 20.1201 (Sections 2.a and 2.b).

- The respiratory protection program was implemented in a manner to keep airborne radiation exposures to as low as is reasonably achievable (Section 2.c).

- The licensee's radiological hazards postings provided adequate controls to communicate to workers the potential hazard and/or protective equipment requirements for working in areas (Section 2.d).

- The contamination survey program was appropriately implemented to protect workers, and identify potential work areas showing an internal or external radiation hazard to workers (Section 2.e).

- Management controls for tracking and trending issues were in place to provide management with details for review and taking actions as appropriate to ensure compliance with license commitments and regulations (Section 2.f).

Waste Management

- Releases of liquid and airborne effluents were as low as reasonably achievable and in accordance with regulatory requirements (Section 3.a and 3.b).

- Records and reports of the airborne and liquid effluents were in compliance with reporting requirements, and no trends were observed in the effluent sample results (Section 3.c).

- The effluent monitoring equipment was maintained adequately in accordance with license requirements (Section 3.d).

- The airborne effluent sampling procedure provided no guidance to handle the stack filters (Section 3.e).

- The solid waste program was adequately planned and was operated effectively to reduce the solid wastes on the site (Section 3.f).

Low-Level Radioactive Waste Storage

- The low-level radioactive waste storage program was found in compliance with applicable license and in 10 CFR Part 20 requirements (Section 4.a).

- The waste storage facilities and activities were found in compliance with applicable license and regulatory requirements (Section 4.b).

Waste Generator Requirements

- The licensee's programs and procedures to maintain control and quality assurance of radioactive waste shipments were found to be adequate. Radioactive waste shipments were in compliance with applicable requirements (Section 5).

Operator Training/Retraining

- The licensee continued to make improvements in their training materials. Personnel training was current. The training program covered the training required in the regulations and the license (Section 6).

Emergency Preparedness

- Emergency Plan procedures and organization changes did not appear to impact the effectiveness of the emergency management program (Section 7.a).

- The revised emergency procedures continued to implement the Emergency Plan (Section 7.b).

- The licensee maintained an emergency response training program which provided instructions to those individuals expected to implement the Emergency Plan (Section 7.c).

- The licensee maintained effective coordination with offsite support organizations for the emergency preparedness program (Section 7.d).

- The equipment used for emergency response was maintained as described in the Emergency Plan (Section 7.e).

Attachment:
List of Persons Contacted
Inspection Procedures Used
List of Items Opened, Closed, Discussed
List of Acronyms Used

## REPORT DETAILS

### 1. Summary of Plant Status

This routine, announced inspection included a review of selected aspects of the licensee's program for radiological protection, waste management, low-level waste storage, waste generator requirements, operator training/retraining, and emergency preparedness. There were no plant upsets or unusual operational occurrences during the onsite inspection. On January 27-29, 2004, David Ayres, Chief of Fuel Facility Inspection Branch 1, in the Division of Fuel Facility Inspection, Region II, met with senior site management and toured the facility.

### 2. Radiation Protection (Inspection Procedure (IP) 83822) R1

a. External Exposure Control (R1.04)

(1) Inspection Scope

The inspector reviewed radiation protection procedures, and discussed with licensee representatives personnel exposure data to determine if exposures were in compliance with regulatory requirements, and if controls were in place to maintain occupational doses As Low As Reasonably Achievable (ALARA).

(2) Observations and Findings

Based on interviews, procedural reviews, and observations of plant personnel inside radiation control areas, the licensee's monitoring program was consistent with requirements in 10 CFR Part 20. From discussions with the licensee, the inspector determined that the licensee had changed personnel monitoring vendors to address an issue from a previous inspection regarding the design of the devices.

Table 1 below displays the maximum assigned dose equivalent exposure data for calendar years (CYs) 2001 and 2002. The licensee performed yearly studies to show compliance with extremity monitoring by providing finger badges to several operators for a specified amount of time. The 2002 results showed levels well below the regulatory limits.

Table 1. Annual Exposures

| Year | Deep Dose Equivalent (DDE) | Total Effective Dose Equivalent (TEDE) | Collective TEDE (person-rem) | Committed Effective Dose Equivalent (CEDE) |
|---|---|---|---|---|
| 2001 | 0.730 rem | 2.202 rem | 105 person-rem | 1.682 rem |
| 2002 | 0.540 rem | 1.956 rem | 104 person-rem | 1.806 rem |

(3) Conclusions

The external exposure monitoring program was implemented in a manner to maintain doses ALARA. Exposures were less than the occupational limits in 10 CFR 20.1201.

b. Internal Exposure Control (R1.05)

(1) Inspection Scope

The inspector reviewed licensee procedures for assessing internal exposure to determine if controls were in place to monitor occupational doses, and verify that the administrative limits were established to control occupational dose ALARA. Exposure data was examined to determine if exposures resulting from various plant operations exceeded limits in 10 CFR Part 20.

(2) Observations and Findings

The inspector reviewed internal procedures for establishing and meeting exposure goals for special projects and elevated samples (i.e. bioassays, lapels, fixed air samplers and potential exposures). The inspector concluded that the procedures contained action limits which were set below federal limits to ensure personnel exposures did not exceed occupational limits in 10 CFR 20.1201. In addition, the inspector determined that the licensee had evaluated and responded promptly to these issues and initiated corrective action and timely follow-up. The inspector noted that the licensee was using the annual limit on intake (ALI) and derived air concentration (DAC) values based on dose coefficients adopted by the International Commission on Radiological Protection (ICRP) as published in ICRP Publication 68.

The licensee uses a dose tracking management system that collects data from lapels, fixed air-samplers, bioassays, and personnel monitoring devices. The data are tracked via probes located strategically around the plant (greater than 100 probes). The system tracks the time, location and respirator usage of all operators logged into specified zones and the data is downloaded daily into the database dose tracking management system. The results are then evaluated and for compliance purposes and trended analysis. In the 2002, the ALARA report had identified several target areas for improvement in areas which were higher that other DACs and areas with high fractional use of respirators.

The following areas were reviewed and discussed with the licensee:

- the weekly air probe downloads and printouts,
- the record verification process by the employee or supervisor, and revisions to account for employee's internal dose,
- the proper wearing of dosimetry on the body, with protective clothing, and for extremity purposes,
- bioassays, and
- the highest total personnel exposures for the year and manual calculations of doses to verify computer programs.

No problems were identified.

(3) Conclusions

The internal exposure monitoring program was implemented in a manner to maintain doses as low as is reasonably achievable. Exposures were less than the limits in 10 CFR 20.1201.

c. Respiratory Protection (R1.06)

(1) Inspection Scope

Respiratory protection equipment issuance, storage, maintenance, and training verification were examined for adequacy in assuring that equipment was being adequately maintained and obtained by certified users only.

(2) Observations and Findings

Interviews with operators and health and safety technicians (HSTs) disclosed that strategically placed computers and software enhancements enable operators to self issue (check-in/check-out) respirators (except for chemical cartridges) via the computer. The licensee indicated that this process improved both the capability for assigning doses based on respirator use and the tracking and verification of respirator training qualification for authorized users. Any employee who was not current in respiratory protection training or had exceeded the deadline for the annual fit test was prevented from checking out a respirator by the computerized system. Once employee training and fit testing requirements became current, the system would allow access.

The respirators and hoses were collected daily for cleaning by the HST. During the inspection, no examples were observed of unauthorized use of equipment by untrained personnel or workers with expired training.

Initial and annual respirator training, except for self-contained breathing apparatus (SCBA) training, were conducted by the training department. The SCBA respirator training, initial and annual, was performed by the Safety Manager for the emergency preparedness teams and other individuals requiring training. In addition, this individual was also responsible for the visual and operational checks required for the SCBA. Initial respirator training consisted of an oral presentation, a video, and hands-on skills training for actual equipment. Annual training was computer-based for all respirators, except SCBA. Annual SCBA training was performed by the Safety Manager. The training department documented and maintained all training. No problems were noted with the training and equipment checks for the devices.

The inspector toured the new medical facility that has been in operation for less than a year. The staff, a medical technician and physician, are contracted in to perform evaluations. The facility performed a variety of medical evaluations including baseline evaluations and respirator fit testing. The inspector observed an operator performing his annual fit testing evaluation. The test was performed in accordance with the licensee's procedures.

(3) Conclusions

The respiratory program was implemented in a manner to keep airborne radiation doses to as low as is reasonably achievable. In addition, the licensee had implemented a respirator program that evaluated respirator fitness and tracked current respirator training and respirator usage.

d. Postings, Labeling, Control (R1.07)

(1) Inspection Scope

The inspector reviewed the licensee's program for posting as required by 10 CFR 19.11 to determine if documents were posted in sufficient places to permit individuals engaged in licensed activity to observe them. Several work locations were examined to determine if radioactive containers were properly labeled and to assess the adequacy of contamination control barriers and posting of radiation areas as required by 10 CFR 20.1902. Radiation Job Permits (RJP) were reviewed to determine the adequacy of the requirements posted for worker protection and the degree to which those requirements were being implemented.

(2) Observations and Findings

Bulletin boards were posted such that workers may observe documents or obtain details as to where documents may be examined. All observed work areas involving radioactive material or potentially contaminated material were properly posted and containers labeled. One area discussed with the licensee regarding posting was the location of the RJP. Documentation from the daily RJP, indicated that all pertinent information had been documented including the possible use of respirators. The inspector observed several airborne radiation areas in the process areas and noted no problems with personnel wearing their assigned respirators.

(3) Conclusions

The licensee's posting provided adequate controls to communicate to workers the potential hazard and/or protective equipment requirements for working in areas.

e. Surveys (R1.08)

(1) Inspection Scope

The contamination control survey program was reviewed to determine if surveys were effective in the identification of contamination and performed in accordance with procedures.

(2) Observations and Findings

The results disclosed that the routine surveys were adequate in the identification of potentially contaminated areas. During the inspection, the inspector interviewed and observed two technicians who performed area and contamination surveys in the Powder Drum Storage building. The inspector discussed taking surveys to determine the radiation level at the time of the inspection. The results were again equivalent to levels for posting as a radiation area. The inspector reviewed randomly selected active and closed RJP for adequacy in providing the appropriate level of protection to workers.

(3) Conclusions

The contamination survey program was appropriately implemented to protect workers, and identify potential work areas showing an internal or external radiation hazard to workers.

f. Management Oversight of Program (R1.11)

(1) Inspection Scope

The inspector reviewed the adequacy of management controls for tracking and trending issues.

(2) Observations and Findings

The inspector determined that NRC and licensee identified issues were being tracked. In addition to performing safety and operational audits, the licensee was in the process of switching database management of issues tracked and corrected. The new system known as the Webcap would centralize and track more efficiently issues that need corrective actions or follow-up. At the time of the inspection, training for the new system was taking place. The licensee indicated that the system would be operational within the next couple of months. In addition, the new system would enable plant management to review and ensure that the appropriate priority was being assigned to items. The licensee indicated that they would continue using the old system in parallel with the new system until identified discrepancies were corrected.

The following audit documents were reviewed during the inspection: *Health Physics Audit* (1/13/04), *Radiation Work Permit/Job Permit* (5/20/03), *Annual Radiation Protection Audit* (12/29/03), *Radiological Safety Training* (2/28/03), *Dose Tracking System Audit* (8/27/03), and *Airborne Audit* (9/15/03). No problems were identified.

(3) Conclusions

Management controls for tracking and trending issues were in place to provide management with details for review and taking actions as appropriate to ensure compliance with license commitments and regulations.

g. Follow-up on Previously Identified Issues (R1.12)

The inspector reviewed the following items for closure:

(Closed) Violation (VIO) 70-1257/2001-002-01: Failure to schedule an in vivo count or document the reason for not being able to.

See inspection report 70-1257/2001-002 with notice of violation and licensee's reply to notice of violation dated June 21, 2001. The inspector reviewed the licensee's reply and corrective actions during an inspection on July 9-12, 2001, and found the licensee's actions adequate. The review was inadvertently left out of inspection report 70-1257/ 2001-004. This item is closed.

(Closed) VIO 70-1257/2001-005-04: Failure to provide recurrent training for a hazardous material (hazmat) employee required by 49 CFR Part 172, Subpart H.

See inspection report 70-1257/2001-005 with notice of violation and licensee's reply to notice of violation received November 27, 2001. The inspector reviewed the licensee's reply and corrective actions during an inspection on January 14-18, 2002, and found the licensee's actions adequate. The review was inadvertently left out of inspection report 70-1257/2002-01. This item is closed.

(Closed) Inspector Follow-up Item (IFI) 70-1257/2003-003-01: Review the licensee's investigation and follow-up on four licensee identified compliance issues involving 1) high radiation areas, 2) improper handling of caustic material resulting in a spill on the operator, 3) an NRC 10 CFR 71.95 reportable transportation incident for improper packaging for shipment, and 4) improper work planning on demolition of hoods containing asbestos. See inspection reports 70-1257/2003-004, 70-1257/2003-005 and 70-1257/2003-008.

The inspector reviewed the corrective actions regarding the asbestos control issue. No safety issues were identified. The other items were previously inspected. This item is closed.

## 3. Radioactive Waste Management (IP 88035) R3

a. Radioactive Liquid Effluents (R3.01)

(1) Inspection Scope

The inspector reviewed the liquid effluents' data to determine if releases were in compliance with 10 CFR Part 20 limits.

(2) Observations and Findings

The inspector reviewed the July 2002 to June 2003 data for the plant effluent monitoring station for liquid effluents. During this period, technetium-99 releases were 0.292 curies (Ci) for the period July 1 to December 31, 2002, and less than 0.162 Ci from January 1 to June 30, 2003. The reported liquid releases in the sewer effluent to the City of Richland

for July 2002 to June 2003, were below the applicable limits in Appendix B to 10 CFR Part 20 and 10 CFR 20.2003.

(3) Conclusions

Liquid effluents were less than the applicable limits specified in accordance with the regulatory requirements.

b. Radioactive Airborne Effluents (R3.02)

(1) Inspection Scope

The licensee's airborne effluents data was reviewed to determine if releases were in compliance with the regulatory requirements.

(2) Observations and Findings

The inspector reviewed the data for the release of radioactive airborne effluents through the plant stacks for the period July 1, 2002, to June 30, 2003. The licensee's airborne effluents were well below applicable limits as required in 10 CFR 20.1302, and well below the uranium isotopic concentration limits of Appendix B, Table 2 of 10 CFR Part 20 and License Condition Section 5.1.1, *Gaseous Effluent Controls*. The calculated doses to the public from the airborne releases were also small fractions of the NRC and Environmental Protection Agency (EPA) dose limits to the public.

(3) Conclusions

Airborne effluents were less than the applicable limits specified in accordance with the regulatory requirements.

c. Records and Reports (R3.03)

(1) Inspection Scope

The inspector reviewed records for the semiannual reports for effluents released as required by 10 CFR 70.59.

(2) Observations and Findings

The inspector reviewed reports and records since the last inspection to identify possible missing data, anomalous measurements, and trends. The inspector found the records and reports in compliance. The inspector also reviewed the licensee's audits for the first, second and fourth quarter of the licensee's Environmental Audit, dated March 3, 2003, July 14, 2003 and December 11, 2003, and the semiannual effluent reports for the second half of CY 2002 and first half for CY 2003. The inspector found that the audits were thorough and included constructive observations, and included the airborne and liquid effluent releases, monitoring and controls for releases to the environment. The data for the effluent report were reviewed and no trends were noted in the results.

(3) Conclusions

Records and reports of the air and liquid effluents were in compliance, and no trends were observed in the effluent sample results.

d. Effluent Monitoring Instruments (R3.04)

(1) Inspection Scope

The inspector verified that the effluent monitoring equipment at the sampling stations and the radiation monitors were in compliance with license requirements.

(2) Observations and Findings

The plant stack filters were changed weekly, counted by the HST, and reported to safety, security and licensing for recording, reporting and data analysis to assure compliance with the regulations. The instruments were source checked daily and calibrated quarterly. The inspector observed that monitoring instruments were operating, calibrated and in good condition. In addition, the inspector reviewed the maintenance records of the radiation monitors to verify they were inspected at the required frequency and that problems, if identified, were corrected. No issues were identified.

(3) Conclusions

The effluent monitoring equipments were maintained adequately in accordance with license requirements.

e. Procedures (R3.05)

(1) Inspection Scope

The inspector observed the effluent sample collection to verify that procedures were followed as required by the license.

(2) Observations and Findings

The inspector observed the HST collect the airborne effluent sample at the K06, K49, K50, K55 and K60 stacks. The inspector also observed another HST collect the liquid effluent sample. The collection of the samples was performed in accordance with the licensee's procedures. However, the inspector noted that in the procedure for the radioactive airborne effluent sampling, no guidance was provided on how to collect the filter in order to maintain the integrity of the sample. The inspector observed the HST collect the sample in a manner that could have affected the result of the sample. Also, the HST did not wear gloves when collecting the filters from the stacks located outside the controlled areas. In response to the inspector's observation, the licensee indicated that the results are often well below the regulatory limits. The inspector indicated to the licensee that in case of an accidental release the method performed by the HST could affect the integrity and

analysis of the sample, and possibly result in personnel contamination of the HST. The licensee immediately addressed the inspector's concern to correct the procedure.

(3) Conclusions

Licensee personnel were following their procedures. However, the airborne effluent sampling procedure did not provide guidance on how to handle the stack filters.

f. Radioactive Solid Waste (R3.06)

(1) Inspection Scope

The inspector toured the radioactive waste areas and discussed the operations with licensee personnel. The inspector reviewed records for the control and release/disposal of solid radioactive wastes in accordance with 10 CFR Part 20.

(2) Observations and Findings

The inspector reviewed the licensee's overall program for management of radioactive solid wastes. The lagoon inventory reduction plan provided a schedule for the closure of the lagoons by September 2004, in accordance with the consent decree with the State of Washington. The licensee's lagoon processing plans have been aggressively set to assure the completion of the processing ahead of the September 2004 date. Lagoon 5A was in the final stages of cleanup of the remaining solids in the bottom of the lagoon. Lagoon 1 was in the deconstruction stage. The liners were being cleaned in the Modular Extraction/Recovery Facility (MERF) facility and stored in boxes for proper disposal. No issues were identified.

The inventory of radioactive solid waste was reviewed and the storage locations were inspected. The solid waste storage areas were posted and the drums were labeled in accordance with the regulations. The inspector found the solid waste program adequately planned and operated effectively to reduce the solid wastes on the site.

(3) Conclusions

The solid waste program was adequately planned and operated effectively to reduce the solid wastes on the site.

## 4. Low Level Radioactive Waste Storage (IP 84900) R5

a. Management Controls and Surveys (R5.01)

(1) Inspection Scope

The inspector reviewed the licensee's low-level radioactive waste (LLRW) storage program to determine whether LLRW were stored safely and in accordance with regulations and license conditions.

(2) Observations and Findings

The inspector reviewed the surveys, inspections and records of the LLRW storage areas. In addition, the inspector verified random selections of drums from the LLRW storage. The waste storage database and the storage areas provided an accurate description and location of the wastes. During 2003, the onsite radioactive waste inventory had been reduced from 23,485 cubic feet to 21,900 cubic feet, representing continued progress in the licensee's program for the reduction of the volume of LLRW stored onsite. No discrepancies were identified.

(3) Conclusions

The LLRW storage program was found in compliance with applicable license and regulatory requirements in 10 CFR Part 20.

b. Adequacy of Storage Area and Package Integrity and Labeling (R5.02, R5.03)

(1) Inspection Scope

The licensee's LLRW storage areas were reviewed to determine the adequacy of proper storage, package integrity and labeling in accordance with license requirements and regulations.

(2) Observations and Findings

The inspector toured the LLRW storage areas, reviewed the storage by type of waste, wastes being prepared for shipment, wastes waiting for processing in the MERF and solid waste uranium recovery facility (SWUR), and wastes waiting for compaction. The signs, postings, labeling, condition of the containers and housekeeping were reviewed and found to be acceptable in accordance with 10 CFR Part 20.

(3) Conclusions

The waste storage facilities and activities were found in compliance with applicable license and regulatory requirements.

## 5. Waste Generation Requirements (IP 84850) R6

a. Inspection Scope

The inspector reviewed the licensee's procedures and quality assurance to ensure compliance with the requirements of 10 CFR Parts 20 and 61 applicable to low-level radioactive waste form, classification, stabilization, and shipment manifests/tracking.

b. Observations and Findings

The inspector reviewed the licensee's procedures, manifests, and shipment files to determine compliance with the regulations contained in 10 CFR 61.55, 61.56 and Appendix G to 10 CFR Part 20. The inspector reviewed six completed waste manifest files for the radioactive waste shipments made during 2003 to a radioactive waste burial facility. The files contained the forms required by Appendix G to 10 CFR Part 20, including the checkoff lists used to determine the completeness of the records, as well as other shipping information required. Also, the licensee's quality waste inspector reviewed the preparation and shipments of radioactive wastes. The tracking of the waste shipments was verified by the receipt of the recipient's acknowledgment of receipt of the manifest in the files. The manifests were complete and met the applicable requirements of Appendix G of 10 CFR Part 20.

The inspector reviewed procedures for the waste assay operation, low-level radioactive waste preparation, and waste shipping guidelines. The inspector had no issues with the procedures or their implementation. The inspector also reviewed the Quarterly Radioactive Waste Handling Audits that included a checkoff list of areas inspected by the licensee and issues found. The corrective actions for issues identified in the audits were adequately addressed. The inspector had no issues with the management, record keeping and quality control of waste shipments.

c. Conclusions

The licensee's programs and procedures to maintain control and quality assurance of radioactive waste shipments were found to be adequate. Radioactive waste shipments were in compliance with applicable requirements.

## 6. Operator Training/Retraining (IP 88010) F2

a. Inspection Scope

The inspector reviewed the licensee's training program to verify that operators were trained prior to perform their duties in general employee training (GET), radiological safety and criticality safety in accordance with regulations and license requirements.

b. Observations and Findings

The inspector discussed the training program changes, as part of the training improvement plan, with the manager of the training facility. The inspector found that the training department was continually making significant improvements to the program.

The training program was reviewed for compliance with the requirements of 10 CFR 19.12, *Instructions to workers.* The inspector determined that the training program provided the GET and follow-up training for radiological safety, criticality safety, respiratory protection, occupational health and safety, and instructions to workers as required.

The inspector reviewed selected records of new and current employees, which included records of employees transferred on a temporary basis to other work areas. The review included the test and examination training records for the new and current employees. The balance of the training records including tests, exams and complete training histories were adequate. The inspector verified that new employees received training for radiological protection and criticality safety. Some current training information for the current employees was missing from the training database and personnel records. The missing information pertained to their annual training on the criticality safety limit cards. The training staff was able to compensate for the database discrepancies with additional paperwork and personnel file information adequately. The inspector determined that the operators were adequately retrained on their criticality safety limit cards.

c. Conclusions

The inspector found that the licensee continued to make improvements in their training materials, and that personnel training was current. The training program covered the training required in the regulations and the license. The licensee continued to make improvements in their training materials

## 7. Emergency Preparedness (IP 88050) F3

a. Review of Program Changes (F3.01)

(1) Inspection Scope

Changes to the emergency response program since the last inspection were reviewed to determine the effectiveness on the program.

(2) Observations and Findings

Since the last inspection, the licensee submitted a revised Emergency Plan (EP) to the NRC dated October 29, 2003. In addition, a revision to Part II, Quick Reference Section, of the EP was issued January, 2004. Changes to the organization were reflected in the emergency call-out list. The changes also reflected the NRC organizational changes placing the entire fuel cycle facility inspection responsibilities from NRC Region IV to Region II. The program changes were reviewed by the inspector and found acceptable.

(3) Conclusions

EP procedures and organization changes did not appear to impact the effectiveness of the emergency management program.

b. Implementing Procedures (F3.02)

(1) Inspection Scope

EP implementing procedures were reviewed to determine if procedures revised since the last inspection were adequate to implement the EP.

(2) Observations and Findings

The inspector reviewed the procedural changes made to the EP in the October 29, 2003, and January, 2004, revisions. The procedure revisions reflected changes to the emergency organization and the emergency action levels dealing with security events. Procedures in some of the emergency action guides prepared for individual positions in the Emergency Operations Center (EOC) had not been updated. The emergency action guides were updated during the inspection. The reviewed changes did not result in a decrease in the effectiveness of the program or any inconsistencies between the EP and implementing procedures.

(3) Conclusions

The revised emergency procedures continued to implement the Emergency Plan.

c. Training and Staffing of Emergency Organization (F3.03)

(1) Inspection Scope

Emergency response training was reviewed to determine if the licensee had provided training to response personnel in accordance with EP.

(2) Observations and Findings

The inspector reviewed the training program, lesson plans and attendance sign-in lists for response positions and functions, including plant emergency response teams, plant emergency response management teams (PERMT), fire, self-contained breathing apparatus, hazmat decontamination and spill control, environmental safety liaison, security, accountability monitor, notification of events, plant emergency director and off-site support groups. The inspector reviewed the enhanced schedule for training sessions and drills (see section 2.f. below). The license had prepared lesson plans and completed training for the emergency response personnel.

(3) Conclusion

The licensee maintained an emergency response training program which provided instructions to those individuals expected to implement the EP.

d. Offsite Support (F3.04)

(1) Inspection Scope

Licensee activities in the areas of training, agreements, and exercises were reviewed to determine if the licensee was periodically involving offsite support groups.

(2) Observations and Findings

The licensee had maintained and updated agreement letters with offsite support groups that provide services during an emergency. The inspector reviewed the training provided to the offsite support groups. The inspector observed the participation of the support groups during the October 22, 2003, exercise. The inspector has previously visited the support groups to discuss the interaction and support provided by the licensee.

(3) Conclusions

The licensee maintained effective coordination with offsite support organizations for the emergency preparedness program.

e. Emergency Equipment and Facilities (F3.06)

(1) Inspection Scope

The EOC and equipment were inspected to determine whether the facility, emergency response equipment, instrumentation, and supplies were maintained in a state of operational readiness.

(2) Observations and Findings

The licensee's emergency equipment and kits were inspected. The equipment locations inspected contained the specified inventory levels and the required equipment was calibrated and maintained. The quarterly tests of emergency phone contacts for the past four quarters were reviewed. The quarterly tests were completed and documented. The offsite evacuation and accountability areas were marked. Criticality badge locations were inspected.

The inspector reviewed the licensee's *2003 Independent Audit of EP Program (EP-2)* dated January 26, 2004. The independent audit performed by the Quality group provided a detailed audit with observations and responses. The inspector also reviewed the *Review of EP Plan and Relevant Procedures after Exercise (EP-1)* dated December 16, 2003. The review documented comments from exercise participants, evaluators and the NRC and the licensee's responses to the comments.

The equipment was determined to be maintained as described in the EP. The licensee performed audits and responses to the readiness of the emergency preparedness program.

(3) Conclusions

The equipment used for emergency response was maintained as described in the EP.

f. Follow-up on Previously Identified Issues (F3.07)

(Closed) IFI 70-1257/2003-009-01: Exercise improvements pertaining to the lack of scenario development, control of exercise development, and training to assure personnel were knowledgeable of the emergency plan and procedures.

See inspection report 70-1257/2003-009. The inspector reviewed the licensee's response concerning the NRC's observation of the emergency preparedness field exercise conducted on October 22, 2003. The licensee's corrective actions included monthly emergency preparedness training sessions for the PERMT; quarterly drills to cover specific emergency preparedness functions, moving the off-year tabletop exercise to July 2004 (versus October 2004) and the field exercise to April 2005 (versus October 2005), and establishing a standing scenario development/controller-evaluator team to provide a trained pool of controller/evaluators to access/control future exercises. The inspector discussed the response and reviewed the training session and drill schedule. The inspector found the response and corrective actions acceptable. This item is closed.

## 8. Exit Interview

The inspection scope and results were summarized on January 29, 2004, and during a telephone conversation on February 10, 2004, with those persons indicated in the attachment. Although proprietary documents and processes were occasionally reviewed during this inspection, the proprietary information is not included in this report. Dissenting comments were not received from the licensee.

## ATTACHMENT

## 1. PERSONS CONTACTED

Partial List of Licensee's Persons Contacted

*R. Burklin, Manager, Radiation Protection
J. Davis, EHS&L, Principal Engineer
*V. Gallacher, Manager, Chemical and Waste Operations
*W. Koglin, Waste Processing Engineer
M. Koontz, Transportation Analyst
*R. Link, Site Manager
*T. Longmire, Manager, Training
*L. Maas, Manager, Licensing and Compliance
*#C. Manning, Manager, Criticality Safety
C. O'Shaughnessy, Training Specialist
*D. Parker, Manager, Environmental Health, Safety & Licensing
S. Percherte, Administration Training Database
*C. Perkins, Manager, Richland Operations
J. Perryman, Environmental Engineer
*T. Probasco, Manager, Safety, Security and Emergency Preparedness
B. Taldlock, Training Specialist
*T. Tate, Supervisor, Radiological Safety
L. Tupper, Manager, Quality Assurance

*Attended exit meeting on January 29, 2004
#Participated on telephone call on February 10, 2004

Other licensee employees contacted included engineers, technicians, and office personnel.

## 2. INSPECTION PROCEDURES USED

| | |
|---|---|
| IP 83822 | Radiation Protection |
| IP 84850 | Radioactive Waste Management - Inspection of Waste Generator Requirements of 10 CFR Part 20 and 10 CFR Part 61 |
| IP 84900 | Low-Level Radioactive Waste Storage |
| IP 88010 | Operator Training/Retraining |
| IP 88035 | Radioactive Waste Management |
| IP 88050 | Emergency Preparedness |

## 3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

| Item Number | Status | Description |
|---|---|---|
| 70-1257/2001-002-01 | Closed | VIO: Failure to schedule an in vivo count or document the reason for not being able to (Section 2.g). |

| | | |
|---|---|---|
| 70-1257/2001-005-04 | Closed | VIO: Failure to provide recurrent training for a hazmat employee required by 49 CFR Part 172, subpart H (Section 2.g). |
| 70-1257/2003-003-01 | Closed | IFI: Review the licensee's investigation and follow-up on four licensee identified compliance issues involving 1) high radiation areas, 2) improper handling of caustic material resulting in a spill on the operator, 3) an NRC 10 CFR 71.95 reportable transportation incident for improper packaging for shipment, and 4) improper work planning on demolition of hoods containing asbestos (Section 2.g). |
| 70-1257/2003-009-01 | Closed | IFI: Exercise Improvements Pertaining to the Lack of Scenario Development, Control of Exercise Development, and Training to Assure Personnel Were Knowledgeable of the Emergency Plan and Procedures (Section 7.f). |

## 4. LIST OF ACRONYMS USED

| | |
|---|---|
| ADAMS | Agency-Wide Document Access Management System |
| ALARA | As Low As Reasonably Achievable |
| ALI | Annual Limit of Intake |
| CEDE | Committed Effective Dose Equivalent |
| CFR | Code of Federal Regulations |
| Ci | Curie |
| CY | Calendar Year |
| DAC | Derived Airborne Concentration |
| DDE | Deep Dose Equivalent |
| EPA | Environmental Protection Agency |
| EOC | Emergency Operations Center |
| EP | Emergency Plan |
| GET | General Employee Training |
| hazmat | Hazardous Material |
| HST | Health and Safety Technician |
| ICRP | International Commission on Radiological Protection |
| IFI | Inspector Follow-up Item |
| IP | Inspection Procedure |
| LLRW | Low-Level Radioactive Waste |
| MERF | Modular Extraction/Recovery Facility |
| NRC | Nuclear Regulatory Commission |
| PARS | Publicly Available Records System |
| PERMT | Plant Emergency Response Management Team |
| RJP | Radiation Job Permits |
| SCBA | Self-Contained Breathing Apparatus |
| SNM | Special Nuclear Material |
| SWUR | Solid Waste Uranium Recovery Facility |
| TEDE | Total Effective Dose Equivalent |
| VIO | Violation |