U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-263/88010(DRSS)

Oocket No. 50-263

Licensee: Northern States Power Company 414 Nicollet Mall Minneapolis, MN 55401

Facility Name: Monticello Nuclear Generating Station Inspection At: Monticello Site, Monticello, Minnesota Inspection Conducted: June 13-17, 1988

Inspector:

Accompanying Personnel: W. W. Ogg

Approved By:

L. R. Greger, Chief Facilities Radiation

Protection Section

7-13-88

Inspection Summary

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Inspection on June 13-17, 1988 (Report No. 50-263/88010(DRSS))

<u>Areas Inspected</u>: Routine, unannounced inspection of radiation protection and radwaste activities during reactor operation, including: organization and management controls (IP 83722); audits (IP 83722); training and qualification of personnel (IP 83723); exposure controls (IP 83724, 83725); ALARA (IP 83728); control of radioactive material and contamination (IP 83726); facilities and equipment (IP 83727); solid radwaste (IP 83722); liquid radwaste (IP 84723); gaseous radwaste (IP 84724) and transportation (IP 86721). In addition, the inspector reviewed actions taken on NRC Information Notices and performed independent contamination surveys.

<u>Results</u>: The licensee's radiation protection program continues to be effective in protecting the health and safety of workers. No violations or deviations were identified.

License No. DPR-22

DETAILS

Persons Contacted

1.

- *L. Brehm, Radiological Services Engineer
- R. Brevig, Emergency Plan Coordinator
- *T. Froelich, Senior Plant Health Physicist (Assistant to the Superintendent, Radiation Protection)
- *D. Nevinski, General Superintendent Engineering and Radiation Protection
- E. Opatz, Radiation Protection Specialist
- D. Orrock, Nuclear Plant Helper, Supervisor
- J. Peterson, Radiochemistry Supervisor
- *T. Parker, Nuclear Support Services
- *W. Shamla, Plant Manager
- *J. Swailes, Superintendent, Radiation Protection
- *P. Yurczyk, Radiation Protection Supervisor
- R. Waterman, Radiation Protection Engineer
- P. Hartmann, NRC Senior Resident InspectorC. Vanderniet, NRC Resident Inspector

The inspector also contacted several other licensee and contractor personnel.

*Denotes those present at the exit meeting.

General

2.

This inspection was conducted to examine operational radiation protection and radwaste activities. The inspection included tours of the reactor building, turbine building, review of licensee records and reports, and independent measurements by the inspectors. Housekeeping was very good.

3. Licensee Action on Previous Inspection Findings

<u>(Closed) Open Item (263/87018-01)</u>: Discrepancies were noted in the use of the controlled area entry control card system (dose card). The licensee took immediate steps to correct the discrepancies by issuing temporary changes to the procedures governing the use of the entry cards and to define actions to be taken for misuse of the system. Permanent procedure changes have now been made. No misuse of the current system was noted. This item is considered closed.

(Closed) Unresolved Item (263/87018-02): The newly appointed Radiation Protection Manager (RPM) does not appear to meet ANSI N18.1 - 1971 as modified by Regulatory Guide 1.8 - 1975. NRR review of an amended licensee submittal for a "backup" RPM to assist the primary RPM for a two-year period found the proposal acceptable. The item is considered closed. See Section 4.

<u>(Closed) Open Item (263/88003-05)</u>: A few hot spots were not posted as they should have been. All postings in the plant were reviewed. "Hot spot" postings and "Special Status Area" postings were added. The radiation protection specialists were reminded of procedures for proper posting. This item is considered closed.

Organization and Management Controls (83722)

The inspectors reviewed the licensee's organization and management controls for the radiation protection and radwaste programs including changes in the organizational structure and staffing, effectiveness of procedures and other management techniques used to implement these programs, experience concerning self-identification and correction of program implementation weaknesses, and effectiveness of audits of these programs. Audits are discussed in Section 5.

The following Radiation Protection personnel changes have occurred since the last radiation protection inspection:

- The lead Senior Health Physicist (HP) went on maternity leave.
- A Senior Health Physicist was appointed as lead HP and Assistant to the Superintendent, Radiation Protection.
- A Radiation Protection Specialist was appointed Emergency Preparedness Coordinator.

The persons newly occupying the above positions, appear qualified in accordance with ANSI N18.1 - 1971 for their respective positions.

On November 15, 1987, the licensee selected an individual to fill the position of Superintendent for Radiation Protection/Radiation Protection Manager (RPM). Upon review of this individual's qualifications, NRR and Region III concluded that he did not meet ANSI 18.1 - 1971 as modified by Regulatory Guide 1.8 - 1975, in that he lacked approximately two years of operating health physics experience to serve as RPM. The licensee proposed to have a second individual (RG 1.8 qualified) to assist the RPM appointee for a period of two years (until the RPM appointee was RG 1.8 qualified). This was considered acceptable. This matter is considered closed.

The inspectors reviewed Radiation Safety Oeficiency Reports (RSDRs) written in 1988 to date. RSDRs are written to document the occurrence and resolution of situations not in keeping with radiological protection objectives. RSDRs can be written for RWP violations, personnel contamination, procedure violations, lost TLDs, off-scale self reading dosimeters, and inadequate control by radiation protection personnel. It appeared to the inspectors that some of the RSDRs had taken an inordinate amount of time to resolve (up to four to five months). This was discussed with radiation protection supervision. Several factors were determined to have slowed down resolution; the licensee is reviewing this matter. RSDR resolution is an action item for the licensee and appears to be adequately documented and tracked.

The inspectors reviewed the licensee's compliance with NRC Generic Letter 82-12 (GL-82-12) Nuclear Power Plant Staff Working Hours. Monticello's overtime policy is described in Administrative Control Document (ACD) 03-1, Revision 9. The overtime policy implements GL-82-12 guidance in that overtime is limited for all nuclear plant staff personnel so that total work time does not exceed 84 hours in any seven day period and that individuals should not be required to work more than 15 consecutive days without two consecutive days off. The inspectors reviewed RPS hours worked during the October/November 1987 outage. No RPS exceeded hours stipulated by the ACD.

No problems were noted.

5. <u>Audits</u>

The inspectors reviewed audits of the radiation protection and radwaste management programs conducted during 1987 and 1988 to date. Extent of the audits, qualifications of the auditors, and adequacy of corrective actions were reviewed.

One corporate audit of radiation protection was conducted since the last inspection. One finding resulted from the audit; the finding concerned the improper filing of ALARA committee meeting minutes. The documents were found and properly filed. The finding was closed by the auditor.

The inspectors reviewed four QA audits of radwaste control as follows:

Audit No. AG 87-44-15 entitled: "Monticello Process Control Program (PCP)." The current revision of Monticello's PCP, Revision 7, is dated May 2, 1988. The PCP is a requirement for all nuclear generating plants which NRC originated in late 1982 in order to effect quality waste solidification. The audit found that the PCP is effectively being implemented through approved procedures. However. the audit questioned whether a revision of the PCP was necessary since dewatering had supplanted cement solidification of resins, and since, at least at present, any cement solidification would have to be done by mobile equipment? (The installed equipment had become inoperable, was dismantled and removed.) The 1988 revision of the PCP included resin dewatering and mobile solidification systems in response to the audit. The licensee representative informed the NRC inspectors that the licensee will keep the installed cement solidification option open.

The NRC regulations (10 CFR 20.311(d)(3)) require that there be a quality control program to assure compliance with 10 CFR 61.55 and 61.56, and further require that the program include management evaluation of audits. The inspectors ascertained in reviewing this and other audits, especially relative to the responses which stem from both QA audit findings and comments, that the requirements are met (see also Section 5).

Audit No. AG 88-12-15 entitled: "Radwaste Management." The audit reported no findings. By comparing plant procedures to plant requirements and to industry good practices, the audit found, with minor exceptions, that radwaste management requirements are effectively implemented.

Audit No. AG 87-24-15 entitled: "Offsite Dose Calculational Manual." The audit reported no deficiencies and verified: (1) compliance with the RETS associated safety evaluation, (2) that respective computer programs were accurate in activity release and/or dose assessment calculations, and that the calculational methods used by those programs were in compliance with OOCM requirements. Two minor tabulational errors found by the auditor were corrected by radwaste management prior to the conclusion of the audit.

The audit commended the Monticello Chemistry Section for its expanded application of the computer in radiological control and documentation. (The NRC inspectors also noted this fact during the inspection of gaseous and liquid radwaste.)

Audit No. AG 87-5-15 entitled: "Spent Fuel Shipments - Monticello." The audit reported no findings/deficiencies and consisted of the observation of the handling and loading of the IF300 fuel cask and comparing this against Procedure No. 8166, Revision 8. The audit noted that the workers involved performed their jobs well.

Training and Qualification (83723)

The inspectors reviewed the training and qualification aspects of the licensee's radiation protection, radwaste, and transportation programs, including: changes in responsibilities, policies, goals, programs, and methods; qualifications of newly hired or promoted radiation protection personnel; and provision of appropriate radiation protection, radwaste, and transportation training for station personnel. Also reviewed was management techniques used to implement these programs and experience concerning self-identification and correction of program implementation weaknesses.

The INPO accreditation team reviewed and accredited the licensee's training programs in 1987.

The inspectors attended Site Specific General Employee Training (GET). In addition to the formal training, the licensee issues a printed handbook for GET to all trainees. The handbook contains sections describing:

- Clean area training
- Controlled area training
- Respiratory Protection training

Every two years all radwaste technical staff attend a week-long seminar given by one of their radwaste vendors. Subjects of the seminar include packaging and transportation of radioactive waste material.

No violations or deviations were identified.

6.

External Exposure Control and Personal Dosimetry (83724)

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8.

The inspectors reviewed the licensee's external exposure control and personal dosimetry programs, including: changes in facilities, equipment, personnel, and procedures; adequacy of the dosimetry program to meet routine and emergency needs; planning and preparation for maintenance and refueling tasks including ALARA considerations; required records, reports, and notifications; effectiveness of management techniques used to implement these programs and experience concerning self-identification and correction of program implementation weaknesses.

The inspectors reviewed the licensee's administrative procedures which govern dosimetry. No problems were noted. Administrative limits are: external limit per quarter without Form 4, 1.0 rem; external limit per quarter with Form 4, 2.0 rem; external limit per year, 4.5 rem (which may be increased to not greater than 5.0 rem by approval of the RP Superintendent). Exposure records of plant and contractor personnel were reviewed for 1987 and 1988 to date. No exposures greater than 10 CFR 2D.101 or licensee administrative limits were noted.

No violations or deviations were identified.

Internal Exposure Control and Assessment (83725)

The inspectors reviewed the licensee's internal exposure control and assessment programs, including: changes in facilities, equipment, personnel; respiratory protection training and procedures effecting internal exposure control and personnel dose assessment; determination whether engineering controls, respiratory equipment, and assessment of individual intakes meet regulatory requirements; planning and preparation for maintenance and refueling tasks including ALARA considerations; required records, reports, and notifications and effectiveness of management techniques used to implement these programs; and experience concerning self-identification and correction of program implementation weaknesses.

The inspector reviewed records of respirator surveillance checks, and toured the respirator testing, maintenance, and issue area at access control. A listing of personnel currently qualified to wear respirators and the type of respirator they are qualified to wear is maintained at the issue station. Prior to issuing a respirator the list is checked for respirator qualification, training, and fit test. The prospective wearer is also checked for interfering facial hair at the issue station and at the control point by the radiation protection specialist (RPS). After use, the respirators are either placed in a barrel at the control point or returned by the user to access control as directed by the RPS. A nasal smear is routinely taken after each respirator use. After each use, the respirators are washed, surveyed, inspected, and tested for facial seal prior to storage. Respirators are stored in plastic bags in individual compartments in a storage rack.

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No problems were noted.

The inspector selectively reviewed whole body count records for plant employees and contractors for 1988 to date. No exposures greater than the 40 MPC hour control measure were noted.

No violations or deviations were identified.

9.

<u>Control of Radioactive Materials and Contamination, Surveys, and</u> <u>Monitoring (83726)</u>

The inspectors reviewed the licensee's program for control of radioactive materials and contamination, surveys, and monitoring including: changes in instrumentation, equipment, and procedures; effectiveness of survey methods, practices, equipment, and procedures; adequacy of review and dissemination of survey data; effectiveness of methods of control of radioactive and contaminated materials; and management techniques used to implement the program and experience concerning self-identification and correction of program implementation weaknesses.

Personnel contamination events were reviewed for 1987 and 1988 to date. There were 657 reported personnel contamination events recorded during This rate of 40-50 per month continues in 1988. The plant was 1987. operational for approximately 9 months of 1987 with 196 reported personnel contaminations recorded during that time. The total number of reported personnel contaminations for the three-month 1987 outage was 461, compared to 338 for all of 1986, which was also an outage year. Contributing factors to the greater number of reported contaminations in 1987 appear to be: improvements in the frisking practice after the 1986 outage, the addition of automated hand and foot friskers in 1987, and the addition of automated whole body friskers at access control early in 1988. Based on these factors, it appears that the apparent increase in contamination events from 1986 to 1987 may have been due to better detection rather than to an actual increase in the number of contaminations. However, based on industry performance numbers, the number of events still appears large. The licensee has taken the following actions to reduce the number of personnel contaminations:

- An automated laundry monitor was installed with limits set equal to or less than industry standards.
- A wet wash program for protective clothing was initiated. All protective clothing is cycled through the wetwash after five dry cleanings.

Dry cleaning fluids are routinely sampled and analyzed to ensure timely changing of laundry filters.

Rubber shoe covers are required to be worn over cloth shoe covers in all contaminated areas.

Decontamination of general areas of the plant to less than $100 \text{ dpm}/100 \text{ cm}^2$ was attempted, but was not completely successful.

A "Hot Particle" program was initiated, including surveys to detect particles, prevent the spread of particles, and clean up areas suspected of generating particles.

Despite these actions, the licensee has not seen an appreciable decrease in personnel contaminations to date.

The inspectors noted that the typical level of personnel contamination is low. Foot contaminations account for 60% of all contaminations.

The licensee has formed a committee to evaluate ways to reduce the number of personnel contaminations. The committee is responsible for recommendations and for followup actions. The large number of personnel contaminations was discussed at the exit meeting. The results of licensee actions will be reviewed during a future inspection (Open Item 263/8801D-01).

Low level noble gases and their particulate daughters exist in certain areas of the plant from radioactive fission gases which escape through steam valve packing. However, since the six fuel reliability indicator radionuclides showed a drastic reduction immediately after the last refueling, there may be only one pin-hole fuel leak now. Also, natural radioactivity (radon and its daughters) are seen and account for some clothing contaminations. The licensee representative also discussed an event of a few fuel pellets having dropped into the reactor vessel during the 1970's. The new whole body friskers are a part of the continued watch for fuel particles. Licensee personnel stated that 90% of discrete particle contamination to date, however, has been from cobalt-60.

10. <u>Maintaining Occupational Exposures ALARA (83728)</u>

The inspectors reviewed the licensee's program for maintaining occupational exposures ALARA, including: changes in ALARA policy and procedures; worker awareness and involvement in the ALARA program; establishment of goals and objectives and effectiveness of meeting them. Also reviewed were management techniques used to implement the program and experience concerning self-identification and correction of program implementation weaknesses.

The collective dose for CY 1987 was approximately 530 person-rem with about 400 person-rem attributable to the outage. The CY 1987 collective dose was approximately equal to the US BWR average for that year. The ALARA goal for 1988, a non-outage year, is 144 person-rem. The dose for CY 1988 through May was approximately 68 person-rem.

No violations or deviations were identified.

11. Facilities and Equipment (83727)

The inspectors reviewed the facilities and equipment used by the licensee for radiation protection activities to determine whether they are adequate to support the radiation protection program.

The inspectors toured the new respirator issue, cleaning and storage area and the new chemistry laboratory. Both areas appear adequate; no problems were noted.

No violations or deviations were identified.

12. Contamination of the Mechanical Vacuum Pump Room

On May 31, 1988, there was a spill of approximately 9,500 gallons of condensate water on the floor of the Mechanical Vacuum Pump Room (MVPR) of the turbine building. The spill was the result of the inadvertent opening of the "E" full flow Condensate Demineralizer Drain Valve (A0-2280). The licensee was in the process of correcting problems with the programmer on the "E" demineralizer when the drain valve inadvertently opened and sent water to the Backwash Receiving Tank. The Backwash Receiving Tank initially contained approximately 7,000 gallons and has a capacity of 8,500 gallons. The licensee estimated that 11,000 gallons of condensate were drained which overflowed onto the MVPR floor. The MVPR had contamination from resin and condensate reading up to 1.2 rad/hr beta direct and 2,000,D00 dpm/100 cm² smearable. The initial washdown of the room reduced the contamination to an average of 50,000 dpm/100 cm² smearable and 15-50 mrad/hr at contact.

As a result of the spill noble gases (Xe-135, Xe-135m) were released from the condensate causing a high radiation alarm (400 μ Ci/sec) on the Reactor Building Ventilation (RBV) Wide Range Gas Monitor (WRGM). The RBV WRGM recorder showed a spike of approximately 2000 μ Ci/sec which was well below the reportable limit of 4,500 uCi/sec.

Flow from the RBV is used as dilution volume for the site stack and therefore a spike of approximately 800 μ ci/sec was noted on the stack WRGM. This spike is about 1.0% of the reportable limit of 90,000 μ Ci/sec for the stack WRGM. Approximately 5.6 curies of noble gases (primarily Xe-135) were released.

During the inspection, the inspectors noted that the MVPR had been decontaminated and returned to operational status. No problems were noted.

13. Solid Radwaste (84722)

The inspectors reviewed the licensee's solid radwaste management program, including: status of the Process Control Program; changes to equipment, procedures, processing, control, and storage of solid wastes; adequacy of required records, reports, and notifications; implementation of procedures to properly classify and characterize waste, prepare manifests, and mark packages for compliance with the requirements of 10 CFR 20.311, 61.55, and 61.56; and experience concerning identification and correction of programmatic weaknesses.

The Process Control Program (PCP) was introduced by NRC in late 1982 to effect quality radwaste solidification in nuclear power plants. The inspectors reviewed Revision 7 of the licensee's PCP dated May 2, 1988. This revision uses a new format in which there are five sub-processes, PCP-2 through PCP-6. PCP-1, entitled "Function" lists purpose, specific commitments to quality methodologies, commitments to regulatory items, and specific ALARA commitments. Each of the other five sub-processes can stand alone. They are:

- Installed Atcor Solidification System
- Absorption of Liquid Wastes
- Dewatering of Resin and Other Filter Media
- Solidification of Resin Using Cement
- Solidification of Oil Using Cement

PCP-1 addresses compliance with "all applicable DOT, 10 CFR 61, 10 CFR 71, 49 CFR and burial site regulations." The PCP and associated implementing procedures form a hierarchy which appeared properly updated, comprehensive, and of good quality. It was noted that PCP 2 emphasized sampling every 10th batch, testing (e.g., pH), and inspecting (e.g., hardness, free water) before solidification recommences.

That the licensee's program included implementing procedures to meet 10 CFR 61 as early as January 1984, and has built up a large data base from routine vendor and in-house analyses is described in Inspection Report No. 50-263/85-05 and is essentially unchanged. The inspectors reviewed a representative sampling of shipment manifests with accompanying Composite Isotopic Reports, reviewing current waste parameters such as radionuclide concentration/quantification, relative radionuclide abundance for scaling factor use, waste classification, and stability characterization as regards conformance with 10 CFR 20.311, 10 CFR 61.55 and 61.56. The licensee makes extensive use of the computer to implement their program.

The inspectors noted no problems with resin and filter waste parameters. However, the derived tritium relative abundance (per cent) was rated to be approximately twenty times higher in DAW than in resin shipments; similarly, the value for carbon-14 was approximately ninety times higher in DAW than in resin. The licensee considers DAW to be 50% water by weight, and the highest concentration of tritium in reactor water is applied to this weight to calculate DAW tritium. For carbon-14, the concentration given by the vendor analysis is multiplied by 90% of the volume of the waste container, the activity of the waste not being taken into account. These methods appear to overestimate tritium and carbon-14 in DAW. The licensee's response to Information Notice 86-20 included a commitment to revise the methodologies for determining the concentrations of these two radionuclides in DAW to more realistic estimates by September 1, 1988. This matter will be reviewed further during a future inspection. (Open Item 263/88010-02)

The inspector reviewed the vendor's dewatering procedure (FO-OP-O32) and noted that the procedure calls for successive running of the dewatering cycle until the quantity of moisture removed is only a fraction of the appropriate volume specified in 10 CFR 61.56(b)(2).

Annual radwaste volumes generated have decreased steadily since 1984. To date for CY 1988, about 2500 cubic feet have been generated; the year's goal is 6000 cubic feet.

The licensee's waste solidification program, implementing procedures and performance in processing and packaging appear to meet all regulatory requirements.

No violations or deviations were identified.

14. Gaseous Waste System (84724)

The inspector reviewed the licensee's gaseous waste system including: determination whether changes to equipment and procedures were in accordance with 10 CFR 50.59; determination whether gaseous radioactive waste effluents were in accordance with regulatory requirements; adequacy of required records, reports, and notifications; determination whether process and effluent monitors are maintained, calibrated, and operated as required; and experience concerning identification and correction of programmatic weaknesses.

New equipment which has been received recently includes a gas flow proportional low background counting system. The particulate air sampling filters will be counted in this counting system. Delivery of a liquid scintillation counting system for tritium and carbon-14 is expected in the near future; liquid scintillation counting media disposal is authorized by 10 CFR 20.306. The licensee representative stated that improved electronics including microprocessor have been added to the main steam line and air ejector off-gas monitor systems and further stated that the complete systems were calibrated after the installation. Later during the inspection, the inspector confirmed the source and electronics calibrations by examining I&C and Radiochemistry records using the licensee's computerized files. The inspectors further examined a random sampling of procedures, functional tests, source checks, and calibrations of the effluent and process monitors and found no problems.

The licensee's wide use of the computer includes documentation of tests and storing the entire test procedure. Technical data such as completed surveillance tests are first transferred to the Plant Schedule Administration for technical approval, then to the Document Control Library where they are prepared, microfilmed, reviewed and verified. The microfilmed data become a part of a particular cassette reel, its cassette number and beginning page number become a part of the house computer memory for future retrieval of that test. Cassettes are stored in large easy-to-dispense cabinets. All this is done in-house at MNGP



and the operation includes ensuring that the completed filmed document is in duplicate and verified before the original is discarded. Document Control specialists stated that the whole process is completed within two weeks.

Review of the licensee's Semiannual Radioactive Effluent Release Reports showed no problems; no technical specification or regulatory limits were exceeded during 1987 and during 1988 to date. Using selected summary average release rates and licensee ODCM Chi over Q valves, the inspectors confirmed by calculation that concentration limits and noble gas dose results were only a fraction of allowed. The licensee representative stated that they have the lowest condenser "air in-leakage" in the industry which results in longer BWR off gas hold-up, and therefore in ALARA.

There were no problems noted with the licensee's gaseous waste monitoring.

After the exit interview, one inspector remained onsite to continue a review of a representative sampling of surveillance tests of the SBGT system. The inspector reviewed twelve test/maintenance procedures for the SBGT system, all of which appeared well written and comprehensive. The inspector also reviewed the following test procedures as a random sample and found no problem:

0162A Stack wide range gas monitor functional test (quarterly)

0163 Stack wide range gas monitor calibration test (annual)

The inspector also reviewed three SBGT completed tests: Operability Test, Charcoal Absorber Cartridge Test and Vibration Check - Standby Gas Fan Motors. The tests were done timely and results met the requirements of the Technical Specification with the possible exception of the Fan Motors Vibration check. In the comment section for that test, the System Engineer had written that No. 11 motor had high vibrations. The inspector contacted the System Engineer, she stated that the motor has exhibited high vibrations in testing for more than a year, but there had been no increase in vibration rate. The NRC Resident Inspector will followup the matter. (Open Item 263/88010-03).

15. Liquids and Liquid Wastes (84723)

The inspectors reviewed the licensee's reactor liquids and liquid radwaste management programs, including: determination whether changes to equipment and procedures were in accordance with 10 CFR 50.59; determination whether liquid radioactive waste effluent were in accordance with regulatory requirements; adequacy of required records, reports, and notifications; determination whether process and effluent monitors are maintained, calibrated, and operated as required; and experience concerning identification and correction of programmatic weaknesses. The inspectors interviewed the Radiochemistry Supervisor, who is responsible for sampling and monitoring the liquid and gaseous streams. He has eight Radiation Protection Specialists working under his supervision. The Monticello plant is a zero-release liquid waste plant. This means that water let down from the primary system is not routed to any effluent stream, but is recycled back into the primary system through the clean-up/processing radwaste streams for re-use in the plant.

The inspector and the licensee representative toured the discharge canal area. About halfway down the discharge canal a sampling standpipe pulls water into an approximately 300-gallon cylindrical monitoring tank located at the plantside bank of the canal and containing two sensitive gamma scintillation detectors. The flow rate of the water is 40 gallon per Every ten minutes a timer energizes a pump which pulls a sample minute. from the monitoring tank into an approximately 60-gallon sample compositing tank. The inspector noted that the compositing tank had no mixing device, and sediment was visible on the bottom of the tank. According to a licensee representative the weekly composited sample is pulled off the A work request authorization (WRA) was initiated for a mixer to top. be installed and another WRA initiated for the drain valve and pipe (used to empty the tank once weekly when the composite sample in taken) to be modified so that after appropriate mixing future samples will be taken off the bottom of the tank. The inspectors will review this matter further during a future inspection (Open Item 263/88010-04).

The inspectors selectively examined daily, annual and quarterly tests/ calibrations associated with process monitors and flow instruments. No problems were noted.

No violations or deviations were identified.

16. Transportation (86721)

The inspectors reviewed the licensee's transportation of radioactive materials program, including: determination whether written implementing procedures are adequate, maintained current, properly approved, and acceptably implemented; determination whether shipments are in compliance with NRC and DOT regulations and the licensee's quality assurance program; determination if there were any transportation incidents involving licensee shipments; adequacy of required records, reports, shipment documentation, and notifications; and experience concerning identification and correction of programmatic weaknesses.

The inspectors reviewed the latest revisions of licensee shipping procedures and found them to be good and to properly address the NRC/DOT requirements. The QC Inspection Procedure No. 002 along with the QA routine audits of Radwaste made in 1988 appear to meet the requirements of 10 CFR 20.311(d)(3) for a quality control program to assure compliance with 10 CFR 61.55 and 61.56.

The inspectors examined the records of solid waste shipments for 1987. They were approximately as follows:

<u>ITEMS</u>	<u>Cu. ft</u>	<u>Ci</u>
Spent Resins, Filter Sludges	2384	552
Dry Compatible Waste	5229	13.5
Other (Solidified oil)	87	0.04

Twenty-one shipments consisting of 3074 cubic feet and 199 curies have been shipped to dated in CY 1988.

The inspectors reviewed the records of three shipments in detail (See Section 13) and noted that radiological survey, package certification, and labeling were found to be correct according to regulatory requirements and procedure.

No violations or deviations were identified.

17. NRC Information Notices

The inspectors reviewed licensee actions in response to the following Information Notices (IN). For all of the Information Notices, the inspectors noted that: the licensee reviewed the IN for applicability; the IN was distributed to appropriate personnel; and if applicable, corrective actions were scheduled/performed.

No. 86-20: Low Level Radioactive Scaling Factors, 10 CFR 61.

Nos 86-23/87-39: "Hot Particle" Surveillance.

No. 86-24: Respirator Users Notice.

No. IN 86-41: Questionable Exposure Readings.

No. IN 86-43: Problems with Silver Zeolite Sampling.

<u>No. IN 86-46</u>: Improper Cleaning and Decontamination of Respiratory Protection Equipment.

No. IN 86-18: NRC On-Scene Response During a Major Emergency.

<u>No. IN 86-22</u>: Underresponse of Radiation Survey Instrument to High Radiation Fields.

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No. IN 86-76:

Problems Noted in Control Room Emergency Ventilation Systems.

<u>No. IN 87-03</u>: Segregation of Non-Radioactive hazardous Wastes from Radioactive Wastes (The inspectors noted that the licensee has a comprehensive procedure, 4 AWI-10.3.3, which addresses this problem.)

<u>No. IN 8707</u>: Quality Control of Onsite Dewatering/Solidification Operations By Outside Contractors.

No. IN 87-031: Securing Radioactive Packages in Transmit.

18. Exit Meeting (30703)

The inspectors met with licensee representatives (denoted in Section 1) at the conclusion of the inspection on June 17, 1988. The inspectors summarized the scope and findings of the inspection. The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee identified no such documents/processes as proprietary.