UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

August 22, 2001

Mr. Michael J. Mocniak, Corporate Manager
Fansteel Incorporated
Number One Tantalum Place
North Chicago, Illinois 60064

SUBJECT: NRC INSPECTION REPORT 040-7580/01-02 AND NOTICE OF VIOLATION

Dear Mr. Mocniak:

This refers to the inspection conducted on July 26-27, 2001, at Fansteel's rare earth recovery facility in Muskogee, Oklahoma. This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel. The enclosed report presents the results of that inspection.

Based on the results of this inspection, the NRC has determined that a violation of NRC requirements occurred. The violation involved your failure to post an airborne radioactivity area in accordance with 10 CFR Part 20 requirements. The violation is cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding it are described in detail in the subject inspection report.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance will be achieved has been adequately addressed as documented in this inspection report. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response (if any) will be made 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/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact Mr. Robert J. Evans at (817) 860-8234 or Dr. D. Blair Spitzberg at (817) 860-8191.

Sincerely,

/RA/

Dwight D. Chamberlain, Director
Division of Nuclear Materials Safety

Docket No.: 040-7580
License No.: SMB-911

Enclosures:
1. Notice of Violation
2. NRC Inspection Report
   040-07580/01-02

cc w/enclosures:
Mr. Fred Dohmann, Corporate Manager
Fansteel Incorporated
Number Ten Tantalum Place
Muskogee, Oklahoma 74403-9296

Mr. Hugh Terrell, Safety Compliance Inspector
Occupational Safety and Health Administration
Region 6, Oklahoma Field Office
Oklahoma City, Oklahoma 73111

Mr. Walter Beckham, City Manager
City of Muskogee
229 West Okmulgee
Muskogee, Oklahoma 74401

Mr. Allyn Davis
U.S. Environmental Protection Agency
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Dr. Loren Mason
District Environmental Manager
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Mr. Mike Brodrick, Administrator
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bcc w/enclosure (via ADAMS distrib):
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ENCLOSURE 1

NOTICE OF VIOLATION

Fansteel, Inc. Docket No. 040-7580
Muskogee, Oklahoma License No. SMB-911

During an NRC inspection conducted on July 26-27, 2001, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

> 10 CFR 20.1902(d) requires that the licensee post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or “DANGER, AIRBORNE RADIOACTIVITY AREA.”
>
> 10 CFR 20.1003 defines an “Airborne Radioactivity Area” as a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exist in concentrations - (1) In excess of derived air concentrations (DACs) specified in Appendix B to 10 CFR 20.1001 - 20.2401, or (2) To such a degree that an individual present in the area without respiratory protection equipment could exceed, during the hours an individual is present in a week, an intake of 0.5 percent of the annual limit on intake (ALI) or 12 DAC-hours.
>
> Contrary to the above, from January 2000 through July 2001, the Sodium Reduction Building, an area with radon-222 concentrations in excess of the DAC value specified in Appendix B to 10 CFR Part 20 (30 picocuries per liter), was not posted with a sign bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or “DANGER, AIRBORNE RADIOACTIVITY AREA.” Specifically, the radon-222 concentrations in the Sodium Reduction Building measured between 35.1 to 71.9 picocuries per liter between January 2000 and July 2001 although the building had not been posted as required by 10 CFR 20.1902(d).
>
> This is a Severity Level IV violation (Supplement IV).

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence and the date when full compliance will be achieved is already adequately addressed on the docket in Inspection Report No. 40-7580/01-02 (Enclosure 2). However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region IV, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made 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/NRC/ADAMS/index.html (the Public Electronic Reading Room). Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

In accordance with 10 CFR 19.11, you are required to post this Notice within two working days.

Dated this 22nd day of August 2001

ENCLOSURE 2

U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	040-07580
License No.:	SMB-911
Report No.:	040-07580/01-02
Licensee:	Fansteel Incorporated
Facility:	Muskogee Plant
Location:	Muskogee, Oklahoma
Inspection Dates:	July 26-27, 2001
Inspectors:	Louis C. Carson II, Health Physicist Nuclear Materials Licensing Branch
	Robert J. Evans, PE, CHP, Health Physicist Fuel Cycle & Decommissioning Branch
Approved By:	D. Blair Spitzberg, Ph.D., Chief Fuel Cycle & Decommissioning Branch
Attachment:	Supplemental Inspection Information

EXECUTIVE SUMMARY

Fansteel Incorporated Muskogee Plant
NRC Inspection Report 40-7580/01-02

This inspection reviewed the site status, management organization and controls, radiation protection, radioactive waste management, and environmental monitoring programs. Overall, the licensee was conducting plant startup operations in a safe and orderly manner.

Site Status, Decommissioning and Work-In-Progress Processing

- The Fansteel plant was in a pilot test mode. Site tours confirmed that the licensee was adequately storing radioactive materials, and security of the material was adequate. Site fences and gates were in good condition, and all storage areas displayed proper radiological postings. Overall, the licensee's decommissioning activities, pilot testing, and facility operations were in accordance with applicable license conditions and NRC regulations (Section 1).

Management Organization and Controls

- The licensee had staffed all key positions, with one minor exception. The staffing level was appropriate for the activities ongoing at the site. The licensee had implemented its audit program in accordance with regulatory and license requirements (Section 2).

Radiation Protection

- A violation was identified regarding the licensee's failure to post the Sodium Reduction Building as an airborne radioactivity area. Corrective actions taken included posting the building and restricting access to the building (Section 3).

- Except for the licensee's failure to post the Sodium Reduction Building as an airborne radioactivity area, the licensee had implemented a radiation protection program that met requirements established in the license and 10 CFR Part 20 (Section 3).

Radioactive Waste Management and Environmental Monitoring

- The environmental and effluent monitoring and radioactive waste programs had been conducted in accordance with the license and regulatory requirements. The licensee collected all required samples at the frequency specified in the license. No sample result exceeded any regulatory or reportability limit (Section 4).

Inspection Followup

- One issue remained open concerning the need for a license amendment request related to the licensee's organizational structure. Changes had been made to the organizational structure that had not been incorporated into the license (Section 5).

Report Details

1 Site Status, Decommissioning of Fuel Cycle Facilities (88104) and Construction Review (88001)

1.1 Inspection Scope

The status of the Fansteel facility was reviewed, including facility operations, construction activities, and decommissioning activities.

1.2 Observations and Findings

a. Background Information

By application dated January 25, 1995, Fansteel requested a license amendment to authorize the onsite processing of pond residues for recovery of precious metals. The residues contained natural uranium and thorium in addition to rare metals. This material has been designated as work-in-progress (WIP) material. The licensee plans to recover these rare metals and simultaneously reduce the total volume of radioactive waste within the WIP material. The licensee also plans to recover calcium fluoride (CaF_2) from existing onsite waste treatment Ponds 6-9.

On March 25, 1997, the NRC authorized Fansteel to proceed with the WIP project and to install a french drain groundwater collection and remediation system. On December 18, 1997, the NRC issued License Amendment 1, which authorized the reprocessing of wastewater treatment residue in Ponds 6-9. On March 15, 1999, the NRC issued License Amendment 4, which removed several license conditions that restricted Fansteel from starting residue recovery operations. The licensee initiated a phased restart operation on April 1, 1999. On August 20, 1999, the NRC approved Fansteel's decommissioning plan. At the time of this inspection, Amendment 8 of the license was in effect.

b. Site Status/Tours

The licensee's reprocessing plant was in a pilot test and startup mode of operation. The licensee was testing plant subsystems and components with varying amounts of WIP/CaF_2 and associated processing chemicals. Pilot test operations were necessary, in part, to test the process circuit because the licensee had re-engineered portions of the plant. Since the previous inspection, the licensee placed the solvent extraction system into operation. The licensee planned to continue with startup operations for several more months.

Site tours were conducted to observe activities in progress. The tours included all buildings, ponds, and radioactive material storage areas. Radiological surveys were conducted using an NRC issued Ludlum Model 19 MicroRoentgen meter (NRC No. 015540, calibrated to radium-226). Site tours confirmed that all areas with radiological materials, including the ponds, french drain system, and the Chem A,

Chem C and Sodium Reduction Buildings were properly maintained and posted with "Caution, Radioactive Material" signs as appropriate.

During the tour of the plant, the inspectors noted that the licensee had roped off the area around the calciner and was collecting air samples at this location. Respirators were required for entry into this area. The licensee was collecting the air samples until it had enough operational data to ensure that the area was not an airborne radioactivity area. Also, the inspectors toured the "penthouse" area, a location above the calciner where elevated airborne material had been previously measured. The licensee took corrective actions including restricting access to the area and mechanically sealing the area. Collectively, the actions taken by the licensee should help reduce the potential hazards to plant personnel from airborne radioactivity in these areas of the plant.

Site security was provided during regular business hours by a security guard and by site personnel. Access to the site was limited by locked gates during non-business hours to prevent unauthorized access to the facility. The site perimeter fence was in good condition and properly posted. All radioactive material storage areas were secured and controlled within the site boundary in accordance with the requirements of 10 CFR 20.1801. All storage areas displayed proper radiological postings as required by 10 CFR 20.1902(e).

1.3 Conclusion

The Fansteel plant was in a pilot test mode. Site tours confirmed that the licensee was adequately controlling radioactive materials, and security of the material was adequate. All radioactive material storage areas were being controlled within the site boundary in accordance with the requirements of 10 CFR 20.1801. Site fences and gates were in good condition. All storage areas displayed proper radiological postings as required by 10 CFR 20.1902(e). Overall, the licensee's decommissioning activities, pilot tests, and facility operations were in accordance with applicable license conditions and NRC regulations.

2 Management Organization and Controls (88005)

2.1 Inspection Scope

The inspectors reviewed the licensee's organization structure and management controls to determine whether functional responsibilities had been clearly established and whether controls were in place to ensure license compliance.

2.2 Observations and Findings

Fansteel's staff included 38 workers in the following four departments: administration, regulatory compliance, chemistry, and operations. The operations staff included 22 workers, and the operators worked 8-hour shifts, 24 hours a day, 5 days a week (Monday-Friday). All key positions were staffed, with one minor exception. The plant

operations manager-process position was being filled on an interim basis by the plant operations manager-mining and utilities.

The inspectors reviewed the licensee's audit program to ensure that the program had been effectively implemented and provided management with useful information. The audit and inspection program requirements were listed in Sections 2.1.2 and 2.5 of the General License. In accordance with the General License, Section 2.5, the licensee is required to conduct an annual audit of the radiation safety program. A third-party contractor conducted the annual audit on behalf of the licensee on July 24, 2001. Section 2.1.2 of the General License requires that the radiation safety committee will review and evaluate, at least every 12 months, trends in the radiation safety, effluent releases, and environmental monitoring programs. This audit is used to support the goal of maintaining exposures as low as reasonably achievable (ALARA). The annual ALARA audit was conducted on March 21, 2001, for calender year 2000 trends. No negative trends were identified. Overall, the audits were adequate and provided useful information to licensee management. The audit program was determined to be in compliance with 10 CFR 20.1101(c) and license requirements.

2.3 Conclusions

The licensee had staffed all key positions, with one minor exception. The staffing level was appropriate for the activities ongoing at the site. The licensee had implemented its audit program in accordance with regulatory and license requirements.

3 Radiation Protection (83822)

3.1 Inspection Scope

The inspectors examined the licensee's radiation protection program for compliance with the license and 10 CFR Part 20 requirements. The inspector conducted tours, reviewed records, and made observations regarding required postings and radiation surveys.

3.2 Observations and Findings

a. Radon Monitoring

Section 3.5.4 of the General License requires that radon sampling be conducted on a quarterly basis in areas identified by the plant radiation safety officer. The inspectors reviewed the licensee's radon monitoring program. Radon was being sampled at seven locations. The radon cannisters were being exchanged on a quarterly basis. The sample results for 2000 and the first quarter of 2001, were reviewed. The sample results for the second quarter of 2001 were provided to the inspectors on August 15, 2001. This information was not available during the onsite inspection.

The highest sample results were consistently measured in the Sodium Reduction Building. The Sodium Reduction Building was being used for storage of bagged pond material. Since the first quarter of 2000, the radon concentration in this building has

varied between 35.1 and 71.9 picocuries per liter (pCi/l). The second highest sample result, 3.9 pCi/l, was measured in the Chem A Building.

Appendix B, Table 1, 10 CFR Part 20, lists the derived air concentration (DAC) value for radon-222, with daughters removed, as 3.0E-8 microcuries per milliliter, or 30 pCi/l.
10 CFR 20.1003 defines an airborne radioactivity area as a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exist in concentrations in excess of the DAC specified in Appendix B.
10 CFR 20.1902(d) requires that the licensee post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or “DANGER, AIRBORNE RADIOACTIVITY AREA.”

The inspectors determined that as of July 26, 2001, the Sodium Reduction Building had radon-222 concentrations in excess of the DAC value specified in Appendix B, 10 CFR Part 20, but was not posted with airborne radioactivity caution signs. The licensee’s failure to post the Sodium Reduction Building as an airborne radioactivity area was a violation of 10 CFR 20.1902(d) (VIO 40-7580/0102-01).

In response to the inspectors’ findings, the licensee immediately posted the area with a temporary sign, ordered permanent signs, and issued a condition report. In the short term, the licensee planned to control access to the building. In the long term, the licensee plans to permanently remove the radioactive material from the building and process the material in the plant. As the material is being removed, the radon concentrations in the building should drop accordingly.

b. Radiological Material Management Program

The inspectors reviewed for 2001, radiological surveys for surface activity and release surveys for compliance with the General License. The licensee conducted the contamination surveys and release survey with approved procedures. Adequate protective clothing and contamination control practices were evident. The inspectors observed workers conduct personal contamination and equipment release surveys on vehicles or other material leaving the restricted area. Records indicated that nothing had been released from the site with contamination levels above the release limits set by the licensee.

The inspectors reviewed the licensee’s program for control of clean trash within the restricted area. The licensee previously allowed a vendor to have unfettered access to the restricted area to pick up clean, uncontaminated trash being stored in dumpsters. The inspectors noted two potential problems with this arrangement. First, the licensee did not routinely survey the trash in the dumpster for radiological contamination. Second, the licensee did not restrict the vendor’s movement inside of the restricted area. Although there was no indication that the vendor had ever transported radioactive trash offsite, the inspectors were concerned that the vendor could unintentionally transport contaminated material offsite for disposal at an unlicensed landfill.

Following discussions with the NRC inspectors, the licensee wrote a condition report to document proposed corrective actions. The licensee planned to start conducting routine radiological inspections of the trash in the dumpters, and the licensee planned to restrict movement of the vendor while onsite in the restricted area. The licensee intended to implement these corrective actions immediately. The inspectors determined that the licensee's contamination control program was adequate.

c. Contamination Surveys

Section 3.5.3 of the General License states, in part, that uniforms are surveyed for alpha contamination prior to pickup by a laundry service. The inspectors noted that coverall surveys were being conducted with an approved procedure. The inspectors reviewed the program for performing contamination surveys on anti-contamination coveralls before shipping them to an offsite laundry processor. The radiation protection technician revealed that they conducted surveys on every coverall prior to release to an offsite laundry facility. Records indicated that no coveralls had been released from the site with contamination levels above the licensee's release limits.

Both fixed and loose radioactivity, as well as ambient gamma radiation exposure rates had been measured throughout the site. Smears for loose radioactivity were counted with calibrated portable and laboratory instrumentation. No significant radiation or loose surface contamination levels were encountered within the restricted area. Loose surface contamination surveys did not detect any contamination levels above 1000 disintegrations per minute per 100 square centimeters (dpm/100 cm^2). The licensee was noted to have a low threshold (less than 100 dpm/swipe) for performing decontamination of areas exhibiting removable radioactivity.

d. Raw Material and Product Sampling

The licensee conducted raw material and product sampling to ensure that product streams were free of licensable material. In accordance with Section 3.5.11 of the General License, cryolite product was sampled for isotopic uranium and thorium prior to transfer to a third-party entity. The inspectors confirmed that the uranium and thorium release criteria (0.04 percent) had not been exceeded.

e. Staff Radiation Safety Training

The licensee's radiation protection training program was reviewed to determine compliance 10 CFR 19.12 for radiation safety instructions to workers and Section 2.3 of the General License, "Training." Section 2.3 of the General License requires that all new employees receive radiation safety training including temporary and contract employees. A review of 2000 and 2001 training documents such as lesson plans and student test results indicated that all personnel had been trained and tested in accordance with the licensee's General License and the requirements of 10 CFR 19.12. Random interviews with several workers confirmed the adequacy of the licensee's training program.

f. Occupational Exposures

Occupational radiation exposures at the Fansteel site during year 2000 and so far in 2001, were essentially zero. The licensee monitors selected workers for internal exposures. During pilot test operations, the licensee implemented a personnel external monitoring program for all radiation workers. Inspectors noted that all workers were wearing thermoluminescent dosimeters (TLD). The inspectors reviewed TLD records and determined that the licensee's external exposure monitoring program was adequate.

The inspectors reviewed the licensee's radiation protection program for controlling internal exposures and detecting internally deposited exposures and assuring compliance with 10 CFR 20.1204 and Section 3.5.1 of the General License. The inspectors determined that Fansteel was continuing to evaluate potential airborne radioactivity hazards associated with operating the reprocessing plant.

The licensee's bioassay program was reviewed for compliance with 10 CFR 20.1703(a)(ii) and (iii). The licensee implements a bioassay program capable of detecting thorium and uranium deposition. The bioassay program was being implemented with an approved procedure. During 2001, the licensee had conducted urine bioassays on newly hired workers. The plant radiation safety officer stated that no worker had been exposed to any significant concentrations of radioactive material. Bioassay records and reports were reviewed for 2001, with no anomalous results noted. Bioassay samples were analyzed by an offsite laboratory. No uranium or thorium was detected in Fansteel's workers. Based on the bioassay results, the inspectors determined that the bioassay program was acceptable considering the current work activities at the site.

g. Radiation Work Activities and Special Work Permits

The licensee had implemented a special work permit (SWP) procedure. During this inspection, the inspectors reviewed all the SWPs that had been implemented during 2001. A review of the radiological work activities being conducted and the potential hazards involved revealed that the work included: operators unloading CaF_2 and WIP material in Chem-A building feed tanks, pilot testing, handling large bags of radioactive material with the potential for inhaling dust, and conducting maintenance on contaminated equipment. The SWP work had been conducted without a significant incident. Discussions with operators indicated they possessed sufficient knowledge of radiation hazards for their assignments. Adequate protective clothing and contamination control practices were evident.

3.3 Conclusions

Except for the licensee's failure to post the Sodium Reduction Building as an airborne radioactivity area, the licensee had implemented a radiation protection program that met requirements established in 10 CFR Part 20, and was considered adequate for current site activities.

4 Radioactive Waste Management (88035) and Environmental Monitoring (88045)

4.1 Inspection Scope

The inspectors reviewed the licensee's environmental and effluent monitoring and radioactive waste management programs to determine compliance with license and regulatory requirements.

4.2 Observations and Findings

a. Environmental and Effluent Monitoring

The environmental and effluent monitoring program requirements were provided in Section 3.5 of the General License. The program consisted of liquid effluent monitoring, groundwater monitoring, and air sampling. The inspectors examined the licensee's routine reports for calender year 2001 and the draft information used in the development of these reports. The inspectors also reviewed the original laboratory data for all environmental and effluent samples collected.

Plant liquid effluents were discharged to the Arkansas River through Outfall 001. Fluids were released about once per month. Samples were collected during each batch release. The fluid was sampled for gross alpha and beta concentrations. Gross alpha and beta action levels were occasionally exceeded. However, the licensee had conducted followup isotopic analysis at the sample point in accordance with the General License. No sample result had exceeded the licensed limit for reportability to the NRC.

Groundwater monitoring consisted of sampling 19 wells and 4 sumps. The wells and sumps were sampled quarterly and analyzed for gross alpha and beta concentrations. The wells were also sampled on a semi-annual basis for a number of chemical constituents in accordance with the licensee's state discharge permit. Nine wells and all four sumps contained fluid that exceeded the beta action level. Four wells and two of four sumps contained fluid that exceeded the alpha action level. In accordance with the General License, the licensee had conducted isotopic analysis of these sample results. No sample result exceeded the reportability limit.

Air particulate samples were collected at six locations, including four perimeter stations, an offisite (environmental) station, and a background station. The air particulate samples were exchanged weekly and analyzed for gross alpha activity. No sample result exceeded the administrative action level for gross alpha contamination.

b. Onsite Spill of Pond Water

On May 31, 2001, the licensee experienced an onsite spill of pond water. Pond 9 was found to be overflowing its bank on the northwest corner. An estimated 84,000 gallons of treated wastewater was released to the environment through stormwater Outfall 005. The cause of the incident was attributed to the failure of a pipe seal. Ponds 8 and 9 were connected by an 8-inch pipe, and failure of the overflow cap seal allowed pond

water to flow unimpeded from Pond 8 to Pond 9. The pipe seal failure resulted in an overfilling of Pond 9.

Corrective actions taken in response to the spill included water sampling and issuance of a condition report. The licensee notified the Oklahoma Department of Environmental Quality about the spill and repaired the connection pipe. Effluent samples were collected at Outfall 005. Gross alpha and beta concentrations were below the respective action levels. Overall, the licensee's response to the incident appeared appropriate for the circumstances. The inspectors determined that the incident was not reportable to the NRC, although the licensee provided a courtesy call to the NRC immediately after the incident occurred.

c. Storage of Radioactive Material

The requirements for temporary storage of licensed material are provided in Section 3.6 of the General License and License Condition 25. The inspectors observed the two locations where the licensee was storing newly processed radioactive waste material. The material was being stored at a temporary storage area located outdoors and inside of the Sodium Reduction Building. The licensee was storing 12 bags (super-sacks) of uranium waste material in the temporary storage area. The bags were stored on pallets and a bermed concrete pad. The inspector observed an ambient gamma exposure rate of about 20 to 30 microRoentgens per hour (μR/hr) in the immediate vicinity of the bags. The inspectors noted that these exposure rate measurements were only slightly higher than background levels. The licensee stated that the waste material had been sampled and contained uranium concentrations of 0.17 percent or less.

The inspectors also observed four drums of waste material being stored in the Sodium Reduction Building. Three drums contained thorium waste material, and the final drum contained uranium waste material. The drum of uranium waste measured 400 μR/hr on contact, while the three thorium waste drums measured up to 1,600 μR/hr on contact. The licensee stated that the thorium waste material contained up to about 1 percent thorium.

The inspectors concluded that the licensee was maintaining adequate control of the radioactive waste material in storage at the site. The inspectors noted that the licensee was storing the waste product in accordance with the license application commitments.

4.3 Conclusions

The environmental and effluent monitoring and radioactive waste programs had been conducted in accordance with the license and regulatory requirements. The licensee collected all required samples at the frequency specified in the license. The effluent and groundwater sample results occasionally exceeded the gross alpha and beta action levels; however, no sample result exceeded any regulatory or reportability limit.

5 Followup (92701)

5.1 (Open) Inspection Followup Item 40-7580/9902-01: Submittal of a license amendment request for an organization change: During a previous inspection, the NRC noted that the licensee's onsite organizational structure was not in agreement with license requirements. Specifically, the position of plant operations manager was split into two positions, plant operations manager-process and plant operations manager-mining and utilities. Fansteel stated it would submit a license amendment request to update the license. This commitment was being tracked in the licensee's open commitment report. As of the current inspection, the license still had not submitted a license amendment request to update the two positions. The plant manager explained that they would submit a license amendment request regarding this matter when operations are beyond the phased startup. Therefore, this issue remains open and will be reviewed during a future inspection.

6 Exit Meeting Summary

The inspectors reviewed the scope and findings of the inspection during an exit meeting that was conducted at the conclusion of the onsite inspection on July 27, 2001. The licensee did not identify as proprietary any information provided to, or reviewed, by the inspectors. Additionally, on August 15, 2000, your staff provided to our staff the radon monitoring results from the second quarter of 2001.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

L. Adams, Document Control Coordinator
J. Burgess, Operations Manager
F. Dohmann, General Manager
H. Notzel, Manager-Technical Services
K. Payne, Plant Radiation Safety Officer/Plant Safety Director

INSPECTION PROCEDURES USED

IP 88005	Management Organization and Controls
IP 83822	Radiation Protection
IP 88035	Radioactive Waste Management
IP 88045	Environmental Monitoring
IP 88104	Decommissioning of Fuel Cycle Facilities
IP 92701	Followup

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

40-7580/0102-01	VIO	Failure to post an airborne area [10 CFR 20.1902(d)].

Closed

None.

Discussed

40-7580/9902-01	IFI	Submittal of a license amendment request for an organization change.

LIST OF ACRONYMS USED

CaF_2	calcium fluoride
CFR	Code of Federal Regulations
DAC	derived air concentration
IFI	Inspection Followup Item
IP	Inspection Procedure
NMSS	Nuclear Material Safety and Safeguards
NRC	Nuclear Regulatory Commission
pCi/l	picocuries/liter
TLD	thermoluminescent dosimeter
VIO	violation
WIP	work-in-progress