

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 40-8027/93-13

License: SUB-1010

Licensee: Sequoyah Fuels Corporation (SFC)
P.O. Box 610
Gore, Oklahoma 74435

Facility Name: Sequoyah Facility

Inspection At: Gore, Oklahoma

Inspection Conducted: November 29 through December 3, 1993

Inspector: G. Michael Vasquez, Senior Health Physicist

Accompanied by: James C. Shepherd, Project Manager
Office of Nuclear Materials Safety & Safeguards

Approved:

Charles L. Cain
Charles L. Cain, Chief, Nuclear Materials
Inspection Section

2/1/94
Date

Inspection Summary

Areas Inspected: Routine, announced inspection of plant status, licensee response to events, contingency plan implementation, and the decommissioning files.

Results:

- The SFC facility remains shut down with limited cleanout activities underway. Concerns regarding housekeeping and contamination control were identified (Section 1).
- Contingency Plan implementation appeared achievable with SFC's current and future staffing plans (Section 3).
- An issue was reviewed involving the licensee's submittal of inaccurate information to NRC in a letter dated July 23, 1993. However, in accordance with guidance contained in NRC's enforcement policy, this issue did not appear to constitute a violation of 10 CFR 40.9 (Section 3).

Summary of Inspection Findings:

- Inspection Followup Item 40-8027/9313-01 was opened in regard to an incident involving the potential release of licensed material in fluorine cells to an unlicensed facility (Section 2).

Attachment:

- Persons Contacted and Exit Briefing

DETAILS

1 PLANT STATUS (83822)

During plant tours, the inspector observed that the uranium hexafluoride (UF6) and depleted uranium tetrafluoride (DUF4) facilities were not operating and that other activities were limited. Some equipment was being utilized to support SFC's ultimate goal of decommissioning. Most notably, the heaters and ventilation system in the ash receiver (AR) enclosure were being used to heat (and dry) drums of yellowcake that had moisture intrusion. However, the vast majority of the processing equipment was idle and had not been in use for some time. In fact, to enter the DUF4 plant, appropriate personnel had to be notified to turn on circuit breakers for the plant lighting system.

Eventually, the licensee plans to shut down the boilers in an effort to reduce costs. At the time of the inspection, the licensee was preparing to move staff from the old administration building, where the boilers provided the source of heat, to the new administration building which has a separate heating source.

The inspector also observed SFC workers preparing drums of yellowcake for shipment. The drums were picked up with a fork lift, and the debris which had collected on the surface was wiped off. (At the inspector's request, the paper cloth which was used to wipe off debris was surveyed and was shown to be free of contamination.) Once the surface of the drums was cleaned, a Health & Safety (H&S) technician performed a removable contamination survey, followed by a contact radiation survey, and the survey results were recorded. When a pallet full of drums had been surveyed, the pallet was set aside in preparation for loading the pallet onto a van which would eventually transport the drums to Allied Signal's plant in Illinois.

The inspector and the project manager noted that prior to the inspection, SFC had replaced the liner in one of the clarifiers. In addition, during the inspection SFC replaced the liner in a second Clarifier (1A). Replacing the liners in the clarifiers required significant manpower efforts and involved participation by the SFC senior managers (vice presidents and the president) as well as the remaining maintenance and operations staff. Licensee representatives stated that SFC planned to replace the liners in all of the clarifiers prior to pumping the contents of Pond 4 to the clarifiers. Replacement of the liner in clarifier 1A was completed on December 1, 1993, without incident.

During plant tours some concerns were identified regarding the attention given to contamination controls. The inspector was informed that SFC management had made a deliberate decision not to prioritize housekeeping and had instead prioritized other decommissioning related tasks, e.g., transferring sludge from ponds in preparation for liner replacement, and vacuuming out residual intermediate products (uranium trioxide or uranium dioxide) from selected systems in the main plant.

During plant tours, the inspector observed tools, debris, and general trash in and around two open tents (commonly used to control contamination during work that involved the potential for high contamination levels) on the fourth level of the main process building. The two tents contained no markings, no barriers, and no step-off pads. The inspector was later informed that the tents had been erected for work involving the hydrogen fluoride backup filters and that the job had been completed in late October. The inspector noted that several weeks after the job had been completed the tents, tools, and some debris still remained at the work site. At an inspector's request, SFC performed a removable contamination survey (one smear) and demonstrated that removable contamination on the floor inside the tents did not exceed facility limits for materials in the controlled access areas. Therefore, this was viewed by the inspector as a housekeeping issue rather than a contamination control issue.

The inspector also observed that a tent had been set up around two of the denitrators. The inspector was concerned that parts of the tent were not fully closed because one of the denitrators was open. In addition, tools were laying in the area near the step-off pad and other debris was in the area. Originally, the inspector was concerned about the potential for airborne contamination, since general air flow patterns in the building were from lower floors upward and the open denitrator was not covered. However, air sample results indicated no airborne contamination. Work on the denitrators was obviously not completed, and the inspector was informed that the job had been ongoing (off and on) for several weeks.

During plant tours conducted on December 2, 1993, the inspector also observed three carts in a walkway behind the ash receivers (ARs). The carts had been used in the ARs while the UF6 plant was still in operation and were visibly contaminated. The plastic covering placed over the carts (for contamination control purposes) did not cover the entire cart, and portions of the exposed areas were visibly contaminated, creating a potential for cross-contamination of other equipment or workers. The inspector requested survey of the exposed portions of the cart which revealed contamination levels of 1,102 - 10,508 disintegrations per minute (dpm) per 100 square centimeters of removable alpha contamination and 3,482 - 31,002 dpm/100 cm² of removable beta contamination. Some of the higher contamination levels exceeded SFC contamination limits for materials in the controlled access areas. In response to the survey findings, actions were taken to cover the carts in order to provide adequate contamination control.

The most notable case of poor contamination controls was observed at the uranyl nitrate hexahydrate (UNH) surge tank which is located outdoors just north of the solvent extraction (SX) building. A large portion of insulation had separated from the tank but was still partially attached and was hanging from the tank. The insulation, which was visibly yellow, was exposed to the elements. The inspector was informed that concerns about the contaminated insulation were discussed a few months prior to the inspection. Apparently, there was some disagreement among the SFC staff members on whether to enact a permanent solution by removing all the insulation from the tank or to enact a

temporary solution by attaching plastic around the insulation and pinning it to the tank. When the inspector asked when the contamination problem was identified, H&S personnel produced a survey record dated September 11, 1993, which documented fixed contamination levels of 100,000 dpm/100 cm² for alpha and 9 million dpm/100 cm² for beta. (The licensee had not performed removable contamination surveys at that time.)

Licensee personnel stated that a tent had been erected in preparation for removal of the insulation during the September time frame. However, the project of decontaminating the tank was deferred due to other projects which were assigned a higher priority by SFC management. Evidence of a tent existed at the time of the inspection; however, it was in an extremely deteriorated condition and did not appear sufficient to prevent the contaminated insulation from being exposed to the elements.

Upon examination of the licensee's procedures, the inspector determined that the contamination control problems associated with the UNH surge tank did not appear to constitute a violation of SFC's license or its procedures. This conclusion was based upon the fact that both the license and procedures establish thresholds, or action levels, for removable contamination only and not for fixed contamination, for items which are located within the restricted area of the facility. SFC performed only a fixed contamination survey in September 1993; therefore, SFC had not identified the levels of removable contamination present on the insulation. However, SFC management acknowledged that the situation should not have been allowed to exist.

After the inspector requested that a removable contamination survey be performed, SFC became aware that removable contamination present on the insulation exceeded facility limits (2,000 dpm/100 cm² for alpha and 20,000 dpm/100 cm² for beta). (Maximum removable contamination was measured at 25,312 dpm/100 cm² beta on December 1, 1993, some 2 1/2 months after the visual contamination was initially discovered.)

Although specific requirements for decontaminating equipment under the circumstances described above were not found to exist in either the license or facility procedures, the inspector did identify procedural guidance which should have prompted SFC to institute contamination controls. Also, procedural guidance was identified regarding facility housekeeping which should have prevented tools and debris being left at work sites. The inspector noted that, in general, housekeeping and contamination control practices warranted additional attention because it appeared that management guidance was not fully consistent with procedural guidance.

Workers discussed a program implemented by SFC in 1992 which stressed Formality, Attention to Detail, Communication, and Teamwork (FACT). Through this program, SFC had made efforts to improve contamination controls at the facility during that time and had planned to maintain these standards throughout decommissioning. However, based upon the above observations and resulting concerns, it appeared that this program was not given the same level of attention as was observed in the past.

2 LICENSEE RESPONSE TO EVENTS (83822)

The inspector also reviewed condition reports documenting events which had occurred since the previous inspection. SFC's condition report system was established in 1992 for use in documenting issues identified by SFC staff or NRC inspectors which are determined to require additional followup or review. The system has been used by SFC as a formal tracking mechanism to assist the staff in ensuring timely followup of incidents and investigations. The incidents reviewed through the condition reporting system during this inspection are discussed below. Due to time constraints, the inspector could not perform a more in-depth review of the condition reporting system; however, the inspector's random sampling indicated that the reports were properly investigated and brought to closure.

The first condition report reviewed documented an event involving the injury of a worker on October 20, 1993. The injury occurred during the manual cleanout of sludge from the bottom of Clarifier 1A (CR 93-10-5). Apparently, two workers were shoveling sludge into 55-gallon drums and then lifting the drums out of the clarifier using a crane to empty the drums into Clarifier 4A. At approximately 10:35 a.m. the crane tipped over as one of the workers was lifting a full drum of sludge. The individual operating the crane jumped from the cab, injuring himself in the process. First aid was promptly rendered at the site, and the individual was transported by SFC to a local hospital. Because the worker was potentially contaminated, due to the work that he was doing at the time of the accident, SFC declared an Unusual Event at approximately 10:50 a.m. (SFC's Contingency Plan identifies this circumstance as an example of an Unusual Event.)

One senior H&S technician and the H&S supervisor were dispatched to the hospital (by separate vehicle) to monitor the injured worker's clothing and the transportation vehicle and to collect any contaminated articles. The surveys completed at the hospital revealed no evidence of removable contamination on the transport vehicle or hospital equipment, and the Unusual Event was terminated at 12:20 p.m. The worker's clothing was collected and returned to the Sequoyah facility.

SFC determined that the causes of the event included improper crane setup and operation. Specifically, due to the position of the crane at the side of the clarifier, a rapid traverse of the crane could have swung the load outside the operating radius. SFC's corrective actions included: (1) a requirement that a lifting pad be installed during future crane use at the clarifiers; (2) reminding employees to perform crane inspections when required and prior to attempted use; and (3) counseling the individuals involved on the need to adhere to lifting parameters prescribed in facility procedures.

A second condition report documented an event involving the transfer of five fluorine cells to a Pennsylvania facility in June 1993. SFC notified the NRC Region IV office on August 17, 1993, that based upon surveys conducted on other fluorine cells in August, the staff suspected that the cells transferred to the Pennsylvania facility might contain licensed material and that the

facility was not authorized to possess such material under an NRC license. This event was documented in SFC's letter to NRC dated August 18, 1993.

Subsequent to SFC's August 18 letter, SFC developed an acid flush system to clean sludge out of the cooling jackets of fluorine cells and later shipped five "clean" fluorine cells to the Pennsylvania facility to replace the ones that had been sent earlier. The original five fluorine cells were returned to SFC on December 1, 1993.

At the conclusion of the inspection, SFC had not yet determined whether licensable quantities of source material had been released to the Pennsylvania facility. SFC planned to conduct further evaluations to determine the total quantity of source material transferred to the above mentioned facility. The issue of whether licensable quantities of source material was transferred to an entity not authorized to receive or possess such material was identified as an Inspection Followup Item and will be reviewed during a future inspection (IFI 40-8027/9313-01).

During discussions held with licensee staff prior to this inspection, licensee representatives noted that even if the five cells had contained licensed material, the material would likely remain in place and not be released into the Pennsylvania facility's heating/cooling water. This conclusion was based on SFC's belief that the material had remained in place within the water jackets during years of operation. This conclusion will be reviewed during the future inspection effort related to the above followup item.

SFC also developed two condition reports regarding procedural violations that were reported by workers during their exit interviews (the employees were furloughed). One of these condition reports had not been closed out, and the other had been closed at the time of the inspection. Through the interviews noted above, SFC determined that some procedure violations involving decontamination activities had occurred. SFC further determined that the cause of the violations was a lack of knowledge of applicable procedure requirements. As a corrective action, workers involved in decontamination activities were to be retrained on applicable procedure requirements. In addition, some procedure modifications were made.

In summary, the inspector found that the licensee's responses to the condition reports appeared proper. The condition report system was still being utilized in the manner intended, and no significant backlog appeared to exist.

3 CONTINGENCY PLAN IMPLEMENTATION (88050)

By letter dated July 23, 1993, SFC submitted a request to NRC to be exempted from requirements to maintain a contingency plan as specified in 10 CFR 40.31(j). During the NRC review of this request, several questions concerning the licensee's calculations were identified. However, as a result of reviewing items other than those initially questioned by NRC, in October 1993 SFC withdrew their exemption request. Therefore, all requirements of the existing Contingency Plan remained in effect at the time of the inspection.

Given the licensee's staff reductions, the inspector and the NRC project manager carefully reviewed SFC's staffing, with particular attention to backshifts, to determine whether the current staffing levels were adequate to implement the Contingency Plan. The inspector and the NRC project manager reviewed the complete range of credible events at the facility as discussed in the Contingency Plan. In both the inspector's and the NRC project manager's judgement, staffing levels appeared adequate to support all required functions outlined in the Contingency Plan.

3.1 Staffing and Contingency Plan Considerations

During the inspection, SFC had in its employment an estimated 81 permanent and 10 temporary employees. SFC had modified the titles of its managers and realigned some of its personnel to reflect the task of decommissioning. Notably, SFC had added a Manager, Health & Safety (H&S), who reported to the Manager, Nuclear Licensing. Licensee representatives stated this effort was intended to provide additional oversight for the H&S organization (previously the Manager, Nuclear Licensing, was overseeing both the Licensing and H&S departments). However, as required under the license, the individual previously designated as the Manager, Licensing and Health Physics, was still fulfilling his licensed responsibilities. The Contingency Plan duties of the new staffing organization were defined in Management Communication Notice (MCN) 93-02, which also specified the minimum shift coverage. The inspector and the NRC project manager reviewed the range of credible events and evaluated the ability of the backshift staff to respond to them, because the backshift has the fewest people on duty.

On the backshift, minimum shift coverage consisted of one senior shift supervisor, one security guard (emergency communication trained), one H&S technician (hazard assessment & first aid trained), and one decommissioning and decontamination (D&D) technician who was to be fire-fighter trained. The senior shift supervisor was to assume the duties and procedural responsibilities of the uranium tetrafluoride (UF₄) and uranium trioxide (UO₃) area shift supervisors and UF₄ and UO₃ control room operators. The D&D technician was to assume the duties and procedural responsibilities of the chemical operators and maintenance technicians. The security guard on shift was to assume the duties of the emergency communicator, and provisions had been made for the guard to accomplish his emergency communications assignments at his normal duty station.

Each person assigned to backshift duty was to have an operational radio on his/her person at all times for communication and accountability purposes. (These items were also verified through interviews with selected shift personnel.)

In evaluating credible accident scenarios, several items were noted: (1) bulk chemicals had been shipped off site; (2) fire loading in the facility was very low; (3) activities which could lead to an emergency (e.g., moving barrels, opening process systems) were to be minimized during backshifts; and (3) in large scale emergencies the workers on the backshifts would primarily be

responsible for notifying other site personnel at home and providing timely notification to offsite agencies as necessary. The inspector and the NRC project manager reviewed individual accident scenarios (discussed in Chapter 3 of SFC's Contingency Plan) with several licensee personnel and discussed scenarios which appeared to be credible.

In reviewing the accident scenarios involving fires, it was also noted that SFC planned to clear out water from some of the fire protection piping ("dry-pipe") in the main process building. Dry-piping parts of the main process building meant that in the unlikely event of a fire in the warehouse or main process building, the onsite responders would have to manually turn one of three valves (depending on which area was affected by the fire) to pressurize the dry-piped systems. Based on the functions of the sprinkler system, the accessibility of the valves, and the potential consequences of such a fire, the inspector and the NRC project manager believed the licensee's plans and staffing appeared reasonable.

The worst-case accident at the Sequoyah Facility, a rupture of a hot 14-ton UF6 cylinder in an outdoor area, was also reviewed. Fire loading in the cylinder pad area was almost non-existent. A small amount of propane remained in a small storage tank, but SFC was arranging to empty the tank. Since it appeared that no heat source remained on site that could sufficiently heat a UF6 cylinder, the worst case accident at SFC was no longer considered credible, regardless of UF6 content in the cylinder.

The inspector also reviewed SFC logs of monthly tests of offsite sirens and tests of the automatic telephone dialing equipment. No problems were noted. Shift personnel were also interviewed to confirm that monthly testing of this emergency communications equipment had been conducted. Interviews of security personnel also indicated that they were adequately trained to fulfill their role as emergency communicators. The inspector observed that facility procedures and adequate equipment existed so that a security officer on shift could fulfill his/her role in the event of an emergency at the normal security duty station.

The inspector also reviewed SFC's most recent Quality Assurance (QA) audit of the Contingency Plan and associated requirements, which was conducted the week prior to the inspection. The audit found that two of SFC's administrative personnel had not received the required annual general employee training (GET) since 1991, which included refresher training on the Contingency Plan. Discussions with licensee personnel also indicated that training records were not as complete as SFC would have liked in that the nature of training that some workers received was not clear and/or difficult to retrieve.

As a result, SFC was preparing to conduct annual GET training for all its employees, which should correct the training concerns noted above. Otherwise, SFC's QA audit findings indicated that the remainder of site personnel had been trained, employee call-out lists were current, emergency notification books had been updated, equipment needed for notification of offsite employees

and local agencies at the security guard's duty station was operational, and that, overall, SFC appeared to be in compliance with its Contingency Plan.

However, the inspector noted one minor issue requiring attention by SFC. Specifically, the Contingency Plan was in need of updating. For example, Chapter 4 contained position titles that did not match SFC's October 3, 1993, organization chart. While it appeared that SFC had adequate staffing to perform the functions identified in the plan, the position descriptions in the Contingency Plan did not match SFC's organization at the time of the inspection. Another example was that SFC had not yet modified the Contingency Plan regarding the automatic shutdown of ventilation in the administration building, the laboratory, and the control room upon activation of the onsite emergency horn. After the November 17, 1992, event (when it was determined that ventilation was shutdown manually rather than automatically as described in the plan) this was identified as a minor modification that SFC could make to the Contingency Plan without obtaining NRC's approval, since it did not appear to decrease the effectiveness of the plan. (The issue was that shutdown of the ventilation system upon activation of the onsite horn, which could be activated during events not involving a gaseous release, was not needed. SFC could develop other criteria, as SFC did in its Contingency Plan Implementing Procedure, for shutdown of ventilation.)

Based on information reviewed during this inspection, the inspector and the NRC project manager concluded that the licensee's staffing appeared adequate to implement the Contingency Plan for credible accident scenarios. However, the Contingency Plan was in need of updating.

3.2 Training of Offsite Organizations

The inspector also reviewed emergency response training provided by SFC to offsite organizations including the Sequoyah County Civil Defense, Muskogee County Civil Defense, Oklahoma State Highway Patrol, Sequoyah County Sheriff's Office, Muskogee County Sheriff's Office, local police departments, U.S. Coast Guard, local fire/rescue services, and the hospitals which maintain agreements with SFC regarding care of injured employees. Training was performed annually by the safety engineer, who was also the contingency plan coordinator. Further, the contingency plan coordinator also stated that he normally visits the offsite (local) organizations when revisions to the OffSite Emergency Management Plan are made. He stated this was done to drop off the latest page revisions, to maintain a rapport with the local agency, and to see if there are any questions.

The inspector reviewed SFC training records for the last two annual training sessions, which included signed statements from the individuals who received training. "Local Offsite Agency Contingency Plan Responder Training" had been conducted by the SFC contingency plan coordinator for at least one representative of all required (offsite) organizations. Records indicated that training had been conducted in May and July 1992, and in June 1993. The SFC contingency plan coordinator stated that training generally consisted of a review of the appendices of the OffSite Emergency Management Plan and

Procedures, which describe the actions that particular offsite agencies should take during various emergencies.

Training for the two local hospitals, with whom SFC maintains agreements, had been performed by an SFC-contracted physician from the University of Oklahoma Health Sciences Center. The physician is a radiation oncologist who is familiar with the potential radiological and chemical health effects associated with the materials used at the Sequoyah facility.

Records indicated that training for offsite medical support personnel was conducted on November 21, 1991, and January 29 and December 2, 1993 (at the time of the inspection) by SFC's contracted physician. SFC's annual training was to be conducted every 12 months, plus or minus 3 months. Thus, training was conducted within the required time frame.

During each training session, the contracted physician visited the Sequoyah facility, Sequoyah Memorial Hospital in Sallisaw, Oklahoma, and Sparks Memorial Hospital in Fort Smith, Arkansas. The content of the physician's reports varied in the level of detail used to describe the training. However, the reports indicated that he trained selected administrative personnel, nurses, and physicians on items such as contamination control methods and practices; techniques of personnel decontamination; triage of contaminated, injured victims; the protocol for the Emergency Care of Radiation Accident Victims; and chemical injuries that could result from the types of chemicals at SFC. Furthermore, the reports indicated that discussions were held with the hospital radiation safety officers.

Documentation indicated that the contract physician also assessed hospital equipment, facilities, and the routine training provided by the respective hospital. The contract physician's report stated that the training conducted on January 29, 1993, included discussions about expected hazards at SFC during the transition from operations to decommissioning and expected hazards during the actual decommissioning. Further, in each report the physician indicated that, in his judgement, the above hospitals remained in a state of readiness to accept and care for the severely injured and potentially radioactive contaminated patient.

The inspector identified no concerns regarding the training of offsite emergency responders.

3.3 SFC'S Withdrawal of Request For An Exemption From Its Contingency Plan Requirements

By letter dated July 23, 1993, SFC requested an exemption from its license requirements to maintain a Contingency Plan. The request for the exemption was based upon an analysis completed by SFC which demonstrated that the maximum intake of uranium by a member of the public (due to a release) would not exceed 2 milligrams. However, on October 19, 1993, SFC informed NRC that some of the assumptions SFC used to complete the analysis and associated calculations were incorrect, and by letter dated October 20, 1993, SFC

withdrew the exemption request of July 23, 1993. The inspector and the NRC project manager reviewed the circumstances surrounding these communications.

In preparing to analyze whether a Contingency Plan was required in accordance with 10 CFR 40.31(j)(1), SFC determined that it would use conservative assumptions to complete the calculations. These assumptions included heating the cylinder remaining on site with the greatest quantity of (depleted or natural) UF6 to 200 degrees Fahrenheit with a corresponding rupture.

The licensing engineer assigned to make the calculations (who resigned some months ago) contacted the accountability supervisor to obtain information regarding the quantity of UF6 contained in the cylinders which remained on site. The accountability supervisor informed the inspector that he had determined the quantity of heel material (the residual UF6 remaining in a cylinder after it has been emptied) by manually subtracting the amount of UF6 SFC loaded into a product cylinder from the amount of UF6 that DOE reported it removed from the cylinder. The accountability supervisor stated when the licensing engineer requested information regarding the amount of UF6 remaining in the cylinders, he (the supervisor) had calculated the heel in approximately 600 of the 1,348 cylinders remaining on site at that time. The maximum heel in the 600 cylinders was 48 pounds, and this number was reported to the licensing engineer. The supervisor stated that the licensing engineer was aware of the fact that the heels from all cylinders had not been calculated.

Since the licensing engineer was no longer employed at the site, he was unavailable for interview during the inspection. However, some licensee personnel believed that the licensing engineer may have assumed that the UF6 cylinders from DOE would have been returned to SFC with a heel less than 50 pounds. Given that assumption, a 48 pound heel appeared reasonable, and the engineer may have assumed that data from about 45 percent of the cylinders was a representative sample.

While it was unclear exactly what information the licensing engineer assumed and what he was aware of, it appeared that the communications between the accountability supervisor and the licensing engineer were not complete. In any event, the calculations were performed with the assumption that the cylinder with the greatest heel contained 48 pounds of UF6.

Licensee personnel stated that a great deal of effort was spent in reviewing the calculations but that no one had thought to question the assumption that 48 pounds was the maximum cylinder heel. Further, the draft copy of SFC's July 23 letter was not circulated to the accountability supervisor for review, nor the Manager, D&D, both of whom later stated that they might have raised questions about using a value of 48 pounds for the calculations.

By early October, an NRC technical review group had completed a review of the SFC calculations provided in the July 23 letter and had developed some questions. NRC headquarters personnel communicated the questions by telephone to licensee personnel. The questions included: (1) why SFC chose the particular breathing rate used in the calculations; (2) why SFC chose the

particular atmospheric dispersion value used for the calculations (the X/Q); and (3) whether SFC could clarify how it derived an 11 kilogram (kg) actual release. In response, SFC's licensing manager began a more thorough review of the assumptions used for the calculations and developed a list of questions and items for different SFC personnel to review.

One of the questions posed by the licensing manager involved asking the accountability supervisor to verify that 48 pounds was the greatest quantity in any cylinder on site. In response, the supervisor informed the licensing manager that since the time the licensing engineer had asked questions about the cylinder heels, he had performed additional calculations and had determined that there were other cylinders with more than 48 pounds heel. Further, the supervisor then recalled that there was probably another cylinder onsite that was almost half full of depleted UF₆. At that time the SFC managers found that, for whatever reason, the licensing engineer had reviewed data from less than half of the cylinders remaining on site.

Through its review, SFC determined that the half-full cylinder had been received from the General Electric (GE) company for testing in the DUF4 plant some years before. During the spring of 1993, as plans were being made for the shutdown of the DUF4 plant, there were discussions among SFC managers about how to disposition the GE cylinder. SFC, through its marketing group, requested that GE retrieve the cylinder. Later, the marketing group was dissolved and the cylinder was "forgotten" until October when the accountability supervisor remembered.

SFC's QA manager commenced an investigation into the circumstances surrounding this incident. While SFC's investigation had not been completed at the time of the inspection, discussions with licensee personnel indicated that SFC's investigation appeared thorough. In addition, SFC's Chairman of the Board went a step further and initiated an investigation using an outside consultant. At the time of the inspection, the results of the consultant's review had not been received by facility management; however, licensee representatives stated that the consultant's review brought up other questions that would have to be addressed.

At the time of the inspection, SFC had not yet completed its determination of the heel weight of every cylinder on site. The heels of about 130 cylinders were yet to be determined due to a lack of documentation (the cylinders had been received by another company, and SFC was attempting to obtain the historical documents needed to calculate the heels). SFC had a total of 1,348 cylinders on site as of December 1, 1993, 20 of which had cylinder heels in excess of 48 pounds. (The largest cylinder heel found at that time was 275 pounds.) SFC had returned the GE cylinder on November 9, 1993.

In assessing whether SFC's letter of July 23, 1993, constituted a violation of NRC requirements (10 CFR 40.9) for failure to provide accurate information to the NRC, two criteria were evaluated: (1) what prompted SFC to re-evaluate the quantity of source material contained in the cylinders that remained on site and (2) whether the information provided in the letter had been used by NRC in

any decision affecting SFC's licensed activities. In accordance with 10 CFR Part 2, Appendix C, Section IX, "Inaccurate and Incomplete Information," no violation is being cited regarding the inaccurate information submitted to NRC in SFC's July 23, 1993, letter. This decision is based on the facts that: (1) SFC reacted appropriately upon discovering the erroneous information that it had submitted in the letter by providing timely notification to NRC; and (2) although the error's detection resulted after NRC asked technical questions, answering NRC's questions would not have reasonably resulted in the discovery of the erroneous information. Thus, the licensee had identified the error and responded appropriately, and NRC had not relied on the erroneous information for any action, such as a licensing action.

4 DECOMMISSIONING FILES (88050)

NRC Inspection Report 40-8027/93-09 dated June 29, 1993, documented some problems with SFC's decommissioning files and the procedure which defined responsibilities for the records. Because of the significance of maintaining the integrity of decommissioning files given the status of the plant, review of the files was designated as Inspection Followup Item 40-8027/9309-01. This issue was reviewed during the current inspection as discussed below.

Inspection Report 40-8027/93-09 identified the licensee's plans to evaluate: (1) data management software; (2) whether the records in the environmental department should have been referenced in the decommissioning files; and (3) SFC's Facility Administrative Procedure (FAP) 1505, "Decommissioning Record Keeping," which was outdated.

During the present inspection the NRC project manager found that SFC's procedure defining the control of and responsibilities for decommissioning records was FAP 1505, Revision 2, "Decommissioning Record Keeping," dated July 30, 1992. The FAP specified functions for six positions in the SFC organization. Comparison of these positions with an organization chart dated October 3, 1993, revealed that the FAP was outdated. Three positions in the FAP no longer existed: those of the Vice President, Business Development; Manager, Engineering; and Manager, Waste Management. A similar finding was also noted in NRC Inspection Report 40-8027/93-09.

In accordance with 10 CFR 40.36, the decommissioning records referenced certain files that were maintained in various offices. However, two of the referenced files were reviewed at random, and it was found that one no longer existed in the referenced location. Specifically, Licensing File 15.1 was no longer maintained by the licensing department, as noted in the decommissioning files, and had instead been transferred to the H&S department. Due to time constraints, the inspector and the NRC project manager did not verify that H&S had actually maintained the file. However, it was noted that Inspection Report 40-8027/93-09 contained a similar concern; specifically, that some records important to decommissioning were improperly referenced.

A review of the environmental department files revealed that the incidents and investigations files appeared to be comprehensive.

In conclusion, the inspector and the NRC project manager found that some of the concerns identified in NRC Inspection Report 40-8027/93-09 had not been addressed. Therefore, Inspection Followup Item 40-8027/9309-01 was not closed and will continue to be addressed during a future inspection.

ATTACHMENT

1 PERSONS CONTACTED

1.1 Licensee Personnel

- G. Barrett, Safety Engineer
- *R. Cook, Vice President, Administration
- T. Cox, Accountability Supervisor
- *J. Dietrich, Vice President, Technical Services
- *J. Ellis, President
- *M. Freudiger, H²S supervisor
- *C. Harlan, Manager, Licensing
- *S. Lambson, Manager, Decommissioning and Decontamination
- D. Lewis, Training Supervisor
- *R. Miller, Manager, Health & Safety (H&S)
- S. Munson, Manager, Site Characterization Project
- *B. Reid, Manager, Quality Assurance
- *K. Schlag, Environmental Engineer

1.2 NRC Personnel Present at the Exit Briefing

- *L. Kasner, Acting Chief, Nuclear Materials Inspection Section
- *J. Shepherd, Project Manager, Office of Nuclear Materials Safety and Safeguards
- *C. Thomas, Acting Director, Division of Radiation Safety & Safeguards
- *M. Vasquez, Senior Health Physicist

In addition to the personnel listed above, the inspector and the NRC project manager contacted other licensee personnel during this inspection period.

* Denotes personnel present at the exit briefing conducted on December 3, 1993.

2 EXIT MEETING

On December 3, 1993, the NRC personnel identified above met with licensee representatives to discuss the scope and findings of the inspection.