UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

August 11, 2004

Mr. Jeff Lux, Project Manager
Cimarron Corporation
Kerr-McGee Center
P.O. Box 25861
Oklahoma City, Oklahoma 73125

SUBJECT: NRC INSPECTION REPORT 070-00925/04-001

Dear Mr. Lux :

On July 12-14, 2004, the NRC conducted an inspection at your Cimarron facility near Crescent, Oklahoma. At the conclusion of the onsite inspection, an exit briefing was held with the site manager, radiation safety officer, and quality assurance coordinator. The enclosed report presents the scope and results of that inspection.

The inspection was an examination of the 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 a review of your organization and management, radiation protection, environmental protection, emergency preparedness, fire protection, radioactive waste management, transportation of radioactive materials, and an unresolved item noted from a previous inspection. No violations of NRC regulations were identified during the inspection.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, please contact D. Blair Spitzberg, Ph.D. at (817) 860-8191 or R. Rick Muñoz at (817) 860-8220.

Sincerely,

/RA/

D. Blair Spitzberg, Ph.D., Chief
Fuel Cycle and Decommissioning Branch

Docket No.: 070-00925
License No.: SNM-928

Enclosure:
NRC Inspection Report
070-00925/04-001

cc w/enclosure:
Kerr-McGee Corporation
Kerr-McGee Center
P.O. Box 25861
Oklahoma City, Oklahoma 73125

Karen Morgan, RSO
Cimarron Corporation
P. O. Box 315
Crescent, Oklahoma 73028

Mr. Earl Hatley
Oklahoma Toxics Campaign
3000 United Founders Blvd. #125
Oklahoma City, Oklahoma 73112

P. L. Bishop, Senior Environmental Specialist
Radiation Management Section
Waste Management Division
Department of Environmental Quality
State of Oklahoma
707 North Robinson Avenue
Oklahoma City, Oklahoma 73102-6087

Mike Broderick
Radiation Management Section
Waste Management Division
Department of Environmental Quality
State of Oklahoma
707 North Robinson Avenue
Oklahoma City, Oklahoma 73102-6087

bcc w/enclosure (via ADAMS distrib):
MASatorius
CLCain
DBSpitzberg
RRMuñoz
KEGardin
KMKalman, FCDB/DWEP
FCDB File
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U. S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	070-00925
License No.:	SNM-928
Report No.:	070-00925/04-001
Licensee:	Cimarron Corporation Kerr-McGee Center Oklahoma City, Oklahoma 73125
Facility:	Cimarron Site
Location:	Crescent, Oklahoma
Dates:	July 12-14, 2004
Inspector:	R. Rick Muñoz, Health Physicist
Approved By:	D. Blair Spitzberg, Ph.D., Chief Fuel Cycle & Decommissioning Branch
Attachment:	Supplemental Information

EXECUTIVE SUMMARY

Cimarron Corporation
NRC Inspection Report 070-00925/04-001

The Cimarron Corporation has been conducting site remediation activities in preparation for the termination of Special Nuclear Materials License SNM-928. Decommissioning inspections, in-process and final radiological surveys had been conducted by the NRC at the Cimarron Site as part of the overall decommissioning and confirmatory survey process. This inspection was an announced core inspection as a continuation of that process. This inspection included a review of organization and management controls, radiation protection, environmental protection, emergency preparedness and fire protection, radioactive waste management, radioactive waste generator activities, and transportation of radioactive materials.

Management Organization and Controls

- The licensee's organization was consistent with the license requirements. The Cimarron ALARA Committee membership met the requirements of License Condition 27(e) (Section 1).

- Three changes were made which related to revised organizational changes and the reporting chain. The revised organizational structure and reporting chain did not cause a degradation in safety or environmental commitments addressed in the NRC approved Cimarron radiation protection plan nor their decommissioning plan (Section 1).

- An unresolved item was closed from the previous inspection which related to an interpretation of License Condition 27(e). Radiation protection procedures were updated on a regular frequency to reflect the program changes. Radiation protection procedures were reviewed and approved by the radiation safety officer (Section 1).

- The licensee had conducted periodic audits and surveillances of its licensed programs. Audits and surveillances were being effectively and objectively implemented. Findings were appropriately identified, tracked, and corrected (Section 1).

Radiation Protection

- The licensee had appropriately implemented the health physics program. No measurable occupational exposure was received through April 2004. Appropriate training had been presented to all affected individuals. The licensee appropriately issued special work permits for work where the potential for significant exposure to radioactive materials existed and for which no standard operating procedure existed. Radiation survey instruments used were operable and within their calibration interval. All removable contamination surveys reviewed were less than the minimum detectable activity. Radioactive sources were stored in a locked and properly labeled cabinet (Section 2).

Environmental Protection

- The licensee had procedures and practices in place to effectively implement the environmental protection program at the site. All environmental samples were taken as required by the license. The public dose assessment last conducted in 2002 indicated that the exposure to the public resulting from site activities was well below the limit specified in 10 CFR 20.1301(a). Due to the significant reduction of radioactive material inventory resulting from decommissioning activities, the licensee presumed that radiation levels have decreased and relied on the 2002 public dose assessment results (Section 3).

Emergency Preparedness and Fire Protection

- The licensee was not required by NRC to have an emergency plan because a radiological emergency with significant offsite consequences was not considered credible. However, the licensee did maintain an emergency plan. Training had been provided to onsite personnel on the emergency plan. Personnel were trained in fire protection and emergency response. No emergency drills had been conducted since the last inspection. Operational fire extinguishers were strategically placed and distributed throughout the facility (Section 4).

Radioactive Waste Management, Waste Generator Requirements, and Transportation Activities

- The licensee had properly shipped 924 pounds of radioactive waste material offsite for disposal at an authorized disposal facility. Transportation survey results were below the applicable NRC limits and concentrations were such that shipment was made as non-regulated material as specified by U.S. Department of Transportation regulations.

- The licensee had effectively implemented the license requirements related to the management, waste generator requirements, and shipment of radioactive waste.

- The onsite waste disposal cell was properly posted and secured (Section 5).

Follow-up

- An unresolved Item was closed which related to determining if the Cimarron ALARA Committee was required to approve changes to all associated radiation protection procedures. The licensee submitted, by letter, an amendment request which is currently under NRC review (Section 6).

- One Inspection Follow-up Item identified was opened to ensure that all future environmental sample results are evaluated against applicable action levels (Section 6).

Report Details

1 Decommissioning Inspection For Fuel Cycle Facilities/Management Organization and Controls (88005, 88104)

1.1 Inspection Scope

The inspector interviewed licensee staff regarding the licensee's status, organizational structure, management and audits and surveillances. The inspector reviewed a number of documents related to these activities. The effectiveness and oversite of the radiation safety officer (RSO) was reviewed.

Observations and Findings

Organization

All surface remediation had been completed. The licensee had been conducting a site groundwater investigation for Burial Area 1 in Area F & C, groundwater (GW) monitoring Well 1319 in Area K, surface water location 1206 in Area M & H, and the surface location 1208 Tc-99 plume in Area G. A total of 27 wells had been added as part of the GW investigation activities since the last inspection. There are three individuals at the site full time. The licensee proposed to eliminate physical presence at the site except for maintaining a 24-hour security guard surveillance of the facility until the plutonium building dismantlement. The licensee proposed to base site personnel out of existing NEXTEP offices in Stillwater, Oklahoma. In addition, all records were proposed to be moved offsite to the corporate offices in Oklahoma City. This change was planned for the first quarter of calendar year 2005. The licensee was writing a proposal for the reorganization to be submitted to the Kerr-McGee corporate office by November 2004.

The licensee intended to initiate a site investigation to determine a location and size for a proposed onsite Class C & D landfill. The licensee planned to construct the disposal cell in Area A, an unaffected area, located approximately 300 feet south, southwest of the existing onsite disposal cell. The proposed cell will be used to dispose of the uranium building, the plutonium building, the emergency evacuation building, and the TIO2 building, all of which had been released by the NRC. The coal liquification section of the TIO2 building will be disposed at an authorized industrial chemical waste facility. Before demolition begins on the plutonium building, asbestos found inside will have to be removed.

At this site, the radiation safety committee is called the As Low as Reasonably Achievable (ALARA) Committee. The ALARA Committee had license authorization to evaluate and approve changes to the decommissioning plan (DP) or radiation protection plan (RPP) in accordance with License Condition 27(e).

Attachment 1-1 of Revision 10 to the Cimarron Radiation Protection Plan described the revised organizational structure and reporting chain. The licensee was operating under

the contractual agreement with NEXTEP Environmental for site management. On June 24, 2003, the ALARA Committee approved the License Condition 27(e) evaluation of the change in the organizational reporting chain. Site management by NEXTEP and the revised organizational reporting chain had been implemented on June 24, 2003.

By letter dated December 17, 2003, Kerr-McGee notified NRC of a reorganization of their Safety and Environmental Affairs Division. This reorganization resulted in changes in personnel and positions. The major change to the organization eliminated the program manager and the planning and regulatory compliance program manager. The position of project manager was created. The Cimarron Corporation was a subsidiary of the Kerr-McGee Corporation. The senior person directly responsible for the site was titled vice president, Cimarron Corporation. The project manager reported directly to the vice president, Cimarron Corporation, Kerr-McGee, who was also titled director of chemical and nuclear environmental remediation, safety and environmental affairs division, Kerr-McGee. The only Kerr-McGee employees at the site on a part time basis are the project manager and the radiation safety officer. The site manager, who is a contractor from NEXTEP Environmental, reported to the project manager. Three individuals, also from NEXTEP Environmental, reported directly to the site manager. These are the quality assurance coordinator; the health physics technician and the clerical staff positions. In addition to reporting to the site manager, the quality assurance coordinator had a direct line to the vice president. The position of health physics supervisor/radiation safety officer had been re-titled as radiation safety officer. The Cimarron RSO reported directly to the project manager and had a direct line to the vice president. The individual working as the radiation safety officer was as noted in the license.

Changes in the radiation protection plan and site decommissioning plan had been evaluated by the Site ALARA Committee and were effective January 1, 2004.

1.2 Procedure Controls

a. Inspection Scope

The inspector reviewed radiation protection procedures revised since the last inspection to verify that the licensee's system for approving procedures complies with license requirements.

b. Observations and Findings

During the last inspection, an unresolved item (URI) 070-00925/0301-01 was opened to determine if the Cimarron ALARA Committee was required to approve changes to radiation protection procedures. License Condition 27(e), stated in part, that the ALARA Committee was required to review all associated procedures with the DP and RPP. In a letter dated August 19, 2003, the licensee requested an amendment to revise License Condition 27(e) to remove the phrases; "and associated procedures" and "in the procedures presented," from this section. The licensee requested the following sentence be added: "All radiation protection program procedures or revisions to these procedures

shall be approved by the RSO. Although the request is currently under review, the unresolved item will be closed.

Section 2.1.1 of Procedure KM-CI-RP-6, "Procedure Generation, Review, and Approval," stated that the radiation safety officer/health physics supervisor (RSO/HPS) had the responsibility for approving all Cimarron radiation protection procedures.

Since the last inspection, the licensee had revised all 15 radiation protection procedures. All procedures were approved by the RSO.

1.3 Audits and Surveillances

a. Inspection Scope

The inspector reviewed annual corporate audit reports and quality assurance surveillance checklists and inspection form reports.

b. Observations and Findings

1. Audits

The annual audit was performed in May 2004 as required by procedure KM-CI-RP-4, "Radiological Control and Safety Audits." The audit was conducted by an auditor from the corporate organization and a contractor from NEXTEP Environmental. The audit identified eight findings addressing internal program requirements. The audit identified the underlying root cause of the findings and addressed corrective actions to prevent recurrence. Audits had corrective actions completed and signed by the appropriate responsible party.

2. Surveillances

Surveillances were performed by the onsite quality assurance (QA) coordinator. Audits were performed by the corporate quality and regulatory compliance department with the assistance of contractors. The last QA surveillance checklist and inspection form was performed on September 19, 2003. The inspector interviewed the quality assurance coordinator and determined that no additional surveillances had been performed. The next surveillance is scheduled for September 2004.

1.4 Safety Committee

a. Inspection Scope

The inspector reviewed the ALARA Committee membership and meeting minutes for compliance with applicable requirements. The annual submittal of License Condition 27(e) changes was reviewed.

b. Observations and Findings

License Condition 27(e).3 specified that membership of the ALARA Committee shall consist of a minimum of three individuals employed by the licensee and one of these shall be designated as the ALARA Committee chairman. Membership shall include an individual with expertise in management; one individual with expertise in decommissioning and one member shall be the site corporate RSO.

The Cimarron ALARA Committee membership consisted of three individuals employed by the licensee and one contractor staff member, all with the required expertise. The ALARA Committee had met at least quarterly. Since the last inspection, three changes to the RPP were made. Changes made were to the organizational structure, titles and responsibilities. Full documentation of the changes were maintained as part of the quality assurance records. The revised organizational changes and reporting chain did not cause a degradation in safety or environmental commitments addressed in the NRC approved Cimarron RPP or the DP.

1.5 Conclusions

The licensee's organization was consistent with the license requirements. The Cimarron ALARA Committee membership met the requirements of License Condition 27(e).

Three changes were made related to revised organizational changes and the reporting chain. The revised organizational structure and reporting chain did not cause a degradation in safety or environmental commitments addressed in the NRC approved Cimarron radiation protection plan nor the decommissioning plan.

An unresolved item was closed from the previous inspection related to an interpretation of License Condition 27(e). Radiation protection procedures were updated on a regular frequency to reflect the program changes. Radiation protection procedures were reviewed and approved by the radiation safety officer.

The licensee had conducted periodic audits and surveillances of its licensed programs. Audits and surveillances were being effectively and objectively implemented. Findings were appropriately identified, tracked, and corrected.

2 Radiation Protection (83822)

2.1 Inspection Scope

The inspector interviewed individuals regarding the implementation of the health physics program, reviewed applicable records, toured the site, and observed the storage of radioactive materials.

2.2 Observations and Findings

Personnel Monitoring

The inspector reviewed the exposure reports through April 2004 submitted by the external dosimetry supplier; selected licensee reports; and internal memorandums related to external dosimetry.

The external dosimetry supplier was accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). The licensee used whole body beta gamma film badges as the primary means of determining the external dose of record. No occupational dose was reported as having been received for any quarter reviewed. A total of 22 visitor badges were reviewed for the period covered. Administrative limits were set at 100-millirem for individuals and 200 mRem for collective dose. Doses for the year 2003 were 0-millirem for individual and collective dose. The licensee's ALARA goals were met.

Training

All individuals who were permitted to enter the Cimarron facility restricted areas received information and training in radiation safety. The depth of the training was commensurate with the potential radiation safety problems and was in compliance with the requirements of 10 CFR 19 and 20. The licensee had several levels of training, such as visitor, escorted radiation worker, radiation worker, and health physics technician training. The RSO was responsible for training workers. Visitor training requirements were approved by the RSO, but could have been administered by radiation workers if delegated by the RSO.

No new employees had been hired since the last inspection. Contractor site specific radiation protection training was presented on July 9, 2004. The licensee had conducted monthly safety meetings and refresher training.

Survey Instruments

The inspector selected one stationary and five portable radiation survey instruments used by the licensee to determine operability, response and calibration. All instruments were operable, had charged batteries, responded to radiation and were within the calibration interval. The licensee had their portable instruments on a 6-month calibration interval and annual for the Tennelec LB 5100 used in the laboratory. Most instruments were calibrated onsite and some were shipped offsite for calibrations.

Radiation Work Permits

Section 9.1 of Annex A of the Radiation Protection Plan required that a special work permit (SWP) be developed whenever work with potentially hazardous or radioactive material is performed. The licensee issued SWPs for work where the potential for significant exposure to radioactive materials existed and for which no standard operating

procedure (SOP) existed. Special work permits used by the licensee contained the details of the job to be performed, any precautions necessary to reduce exposure and radiological monitoring and sampling required before, during, and following completion of the job. The RSO indicated, by signature, the review of each SWP prior to the initiation of the work. Activities since the last inspection were related to groundwater well construction and plugging and one radioactive waste shipment. A total of three RWPs had been issued since the last inspection. The work was carried out in adherence to the conditions of the SWPs. Training was verified on all SWPs. Each work permit included a signed and dated sheet by all parties involved and initialed by the health physics (HP) technician or site manager. No problems with the SWP program and SWPs issued were identified.

Removable Contamination Surveys

Procedure KM-CI-RP-39 required removable alpha contamination surveys using wipes be conducted periodically at to ensure that no radioactive contamination had inadvertently spread. The licensee performed quarterly smears of the source locker and monthly smears in the HP count room and instrument laboratory. Surveys of change rooms, offices, guard station and laundry room had been discontinued through ALARA committee review and approval. Area wipes not conducted as part of the routine weekly wipe surveys were last performed on January 22, 2003, during the most recent significant decommissioning activities. Personnel monitoring devices were surveyed for removable contamination before being shipped for processing. Results for all removable contamination surveys reviewed were less than the minimum detectable activity (MDA).

Security

The licensee maintained all radioactive sources in a secured cabinet. The cabinet was observed to be locked and the appropriate posting was in place. The licensee maintained 35 radioactive check sources in the secured cabinet safe. The sources were leak-tested and inventoried quarterly by procedure KM-CI-RP-35, “Source Receipt, Control, Inventory, Leak Testing & Disposal,” Revision 5. Quarterly inventories and leak testing were performed through May 17, 2004, with all sources secure and accounted for.

2.3 Conclusions

The licensee had appropriately implemented the health physics program. No measurable occupational exposure was received through April 2004. Appropriate training had been presented to all affected individuals. The licensee appropriately issued special work permits for work where the potential for significant exposure to radioactive materials existed and for which no standard operating procedure existed. Radiation survey instruments used were operable and within their calibration interval. All removable contamination surveys reviewed were less than the minimum detectable activity. Radioactive sources were stored in a locked and properly labeled cabinet. Radiation protection procedures were reviewed and approved by the radiation safety officer.

3 Environmental Protection (88045)

3.1 Inspection Scope

The environmental protection program records was reviewed to assess the effectiveness of the licensee's programs and to evaluate the impact, if any, of site activities on the public and the local environment.

3.2 Observations and Findings

a. Environmental Monitoring

Section 15 Revision 5 of the Cimarron Radiation Protection Plan requires the licensee to implement an environmental monitoring program. The licensee's environmental monitoring program includes monitoring surface water and groundwater well sites. The licensee's program no longer required the licensee to submit an annual environmental report to the NRC; however, the analytical data is retained onsite. An ongoing groundwater and surface water investigation to identify contamination plumes resulted in all analytical data, including environmental monitoring program data, being combined into one report. The records of the analytical results of surface and groundwater wells specified in Annex A of the RPP were commingled with the investigation wells and surface water locations. As a result, the licensee failed to maintain closer attention to the commitments of the license conditions. Specifically, Section 15.2 states, in part, that analysis for Tc-99 shall be performed if the gross beta to gross alpha ratio exceeded: 3:1 and gross beta exceeded 30 pCi/l. There were no records to verify that the licensee had evaluated the beta:alpha ratio for sample results exceeding the 30 pCi/l action level. Upon further investigation, it was noted that none of the samples exceeding the 30 pCi/l action level triggered the 3:1 ratio action level. Despite none of the samples having exceeded both action levels, the observation that the licensee had not, in all cases, evaluated the results against both action levels was a potential problem. An inspection follow-up item (IFI) 070-00925/0401-01 is opened to ensure that all future results of samples are evaluated against applicable action levels.

b. Surface Water Monitoring

Surface water samples were collected annually at seven locations and were analyzed for gross alpha, gross beta, and total uranium concentrations. Additional analysis for isotopic uranium was performed if the gross alpha action level of 15 pCi/l or gross beta action level of 20 pCi/l was exceeded. Annex A of the RPP required analysis for Tc-99 be performed if the gross beta to gross alpha ratio exceeded 3:1 and gross beta exceeded 30 pCi/l. The inspector reviewed the June 2003 environmental sampling event analytical data normally used to compile the annual environmental report. Additional analysis for isotopic uranium were performed when necessary. The highest surface water sample result was sample location 1208 which recorded a gross alpha of 205 pCi/l, gross beta of 1550 pCi/l and Tc-99 at 5300 pCi/l. Sample Location 1208 is in a stream north of Uranium Pond #2 located in Subarea G. Although surface water Sample 1206

results for gross beta was 33.1 pCi/l, the licensee did not analyze for Tc-99 since the ratio of alpha to beta did not exceed 3:1.

c. Groundwater Monitoring

On February 28, 2003, monitoring Well 1319 was replaced by 1319 B-1 and 1319 C-1 on March 26, 2003. Monitor Well 1319 was initially installed as a water supply well, not a monitor well. It was screened across several water-bearing zones, was in poor condition, was large diameter and was steel cased. The licensee determined that analytical results from the well could not provide the information needed to determine the zone in which uranium contaminated groundwater was present. Consequently, the licensee plugged and abandoned the well and replaced it with properly installed monitor wells screened separately in each water bearing zone. The licensee updated the radiation protection plan and associated procedures to reflect this change.

Groundwater well samples were collected annually at 26 monitoring well (MW) locations and were analyzed for the same constituents as surface water. Additional analysis for isotopic uranium was performed if the gross alpha action level of 15 pCi/l or gross beta action level of 20 pCi/l was exceeded. Annex A of the RPP required analysis for Tc-99 be performed if the gross beta to gross alpha ratio exceeded 3:1 and gross beta exceeded 30 pCi/l. The inspector reviewed the June 2003 environmental sampling event analytical data normally used to compile the annual environmental report. Additional analysis for isotopic uranium were performed when necessary. The highest GW sample result for gross alpha was GW 1315R with 1780 pCi/l; gross beta was GW 1312 with 978 pCi/l and 2060 pCi/l of Tc-99. Groundwater Well 1312 is west of the landfill in Subarea O and 1315R is north of burial pit in Subarea F. Groundwater MWs 1315R, 1316R, 1319 B-1, 1319 C-1, TMW-13, 1313 and surface water Sample 1206 results for gross beta were and all in excess of 30 pCi/l gross beta, the licensee did not analyze for Tc-99 since the beta to alpha radio did not exceed 3:1.

The licensee was continuing to monitor the contaminated groundwater within and adjacent to Burial Area 1. Groundwater monitoring wells in this area have reported total uranium concentrations greater than the 180 pCi/l total uranium release criteria specified in the license for groundwater. The licensee was monitoring this area as part of the site GW investigation. On April 17, 2002, the licensee submitted a work plan to delineate and evaluate the groundwater plume within and adjacent to Burial Area 1. Ground water MW 1319 B-1, 1319 C-1, and TMW-13 all exceeded 180 pCi/l total uranium concentrations. The licensee was continuing to monitor these wells on a quarterly basis as required. The licensee's investigation consisted of monitoring the groundwater quality, hydrology and soil activity in the area. Upon completion of all field investigation work, the licensee was reviewing several groundwater remediation plan options to be submitted for NRC approval.

d. Ambient Radiation Monitoring

Section 15.4 of the Radiation Protection Plan states that thermoluminescent dosimeters (TLDs) would be posted throughout the facility and at boundaries to monitor potential

exposures to individuals in unrestricted areas. During 2001, the licensee only measured ambient radiation for the first quarter. During the second quarter 2000, the licensee implemented an ALARA Committee approved change to the decommissioning plan to eliminate the use of TLDs to monitor ambient radiation.

The inspector reviewed the licensee's public dose assessment dated April 17, 2002 to ensure that site activities did not result in a total effective dose equivalent in excess of 100-millirem per year to individual members of the public as specified in 10 CFR 20.1301(a). The licensee utilized TLDs throughout the facility and at boundaries to monitor potential exposures to individuals in unrestricted areas. Background at the site averaged 7 µR/hr, or approximately 60-millirem per year. During 2002, the exposure to the public resulting from site activities were less than 10 percent of the limit specified in 10 CFR 20.1301(a).

3.3 Conclusions

The licensee had procedures and practices in place to effectively implement the environmental protection program at the site. All environmental samples were taken as required by the license. The public dose assessment last conducted in 2002 indicated that the exposure to the public resulting from site activities was well below the limit specified in 10 CFR 20.1301(a). Due to the significant reduction of radioactive material inventory resulting from decommissioning activities, the licensee presumed that radiation levels have decreased and relied on the 2002 public dose assessment results.

4 Emergency Preparedness and Fire Protection (88050, 88055, 88104)

4.1 Inspection Scope

The inspector reviewed the licensee's emergency plan and fire protection program, interviewed responsible personnel, toured the facility, and reviewed records of training.

4.2 Observations and Findings

The NRC does not require the licensee to have an emergency plan because a radiological emergency with significant offsite consequences is not considered credible. However, the licensee did have a site emergency preparedness plan as a section of the Health and Safety Plan. This plan was last revised on February 3, 2004. Training to the licensee's staff and contractors was provided in February 2004 and ongoing to site contract workers on an as needed basis. During the training, procedure changes were discussed. No emergency response drills have been conducted in the last two years.

Records reviewed indicated that the last fire protection and response training was provided on June 9, 2004. During a tour of the facility, the inspector observed that operational fire extinguishers were located throughout the facility buildings and were checked on a monthly basis. Other fire extinguishers that were not required and were considered to be out-of-service were properly tagged as out-of-service. The licensee stated that these out-of-service fire extinguishers would be removed from the building.

The licensee had a visit from the local fire marshal on December 11, 2001. A site tour was conducted and the fire marshal discussed the Guthrie Fire Department's response role at the Cimarron facility in the case of a fire or other emergency. The licensee had not experienced any fires or other emergencies since the last inspection.

4.3 Conclusions

The licensee was not required by NRC to have an emergency plan because a radiological emergency with significant offsite consequences is not considered credible. However, the licensee did maintain an emergency plan. Training had been provided to onsite personnel on the emergency plan. Personnel were trained in fire protection and response. Operational fire extinguishers were distributed throughout the facility.

5 Transportation Activities (86740)
Radioactive Waste Management and Waste Generator Requirements (84850)

5.1 Inspection Scope

The inspector interviewed licensee representatives, toured the site, and reviewed applicable records related to radioactive waste management to determine if the licensee had established and maintained an effective radioactive waste management program and to determine whether transportation of licensed materials was in compliance with the applicable NRC and US Department of Transportation regulations.

5.2 Observations and Findings

On December 22, 2003, the licensee had one shipment of radioactive waste to an offsite authorized disposal facility. The shipment consisted of 540 cubic feet of uranium contaminated soils generated during ground water well construction and repair. The shipment contained material that was characterized as waste greater than the Branch Technical Position (BTP) Option 2 concentration limit of 100 pCi/g uranium; therefore, requiring burial offsite.

The inspector reviewed shipping papers and survey results associated with the radioactive waste shipment. NRC Forms 540 (uniform low-level radioactive waste manifest-shipping paper) and 541 (uniform low-level radioactive waste manifest-documentation associated with transportation) were reviewed for completeness. All required forms were completed and contained all relevant information. The transportation records also revealed that all external radiation and removable surface contamination surveys were below the limits specified in 10 CFR 71.87(I) and (j). The total concentration of the waste was such that the shipment was non-regulated material as specified by U.S. Department of Transportation regulations.

At the time of the inspection, there were no temporary storage/staging areas for radioactive wastes from building demolition, equipment dismantlement, soil excavation or GW well construction. No decommissioning waste material had been free released offsite for disposal. The onsite waste disposal cell was properly posted. The licensee

had placed cairns on each corner of the disposal cell that delineated the cell's location. The onsite disposal cell was adequately protected by fencing around the entire site, onsite security, and a 4-foot cap of clean soil and completely vegetated.

5.3 Conclusions

The licensee had properly shipped 924 pounds of radioactive waste material offsite for disposal at an authorized disposal facility. Transportation survey results were below the applicable NRC limits and concentrations were such that shipment was made as non-regulated material as specified by U.S. Department of Transportation regulations. The licensee had effectively implemented the license requirements related to the management, waste generator requirements, and shipment of radioactive waste. The onsite waste disposal cell was properly posted and secured.

6 Follow-up (92701)

(Closed) Unresolved Item 070-00925/0301-01: Determine if the Cimarron ALARA Committee was required to approve changes to radiation protection procedures.

In a letter dated August 19, 2003, the licensee requested an amendment to revise License Condition 27(e) to remove the phrases; "and associated procedures" and "in the procedures presented," from this section. The licensee requested the following sentence be added: "All radiation protection program procedures or revisions to these procedures shall be approved by the RSO. Although the request is currently under review by NRC, the unresolved item will be closed.

(Open) IFI 070-00925/0401-01: Section 15.2 states, in part, that analysis for Tc-99 shall be performed if the gross beta to gross alpha ratio exceeded: 3:1 and gross beta exceeded 30 pCi/l. There were no records to verify that the licensee had evaluated the beta:alpha ratio for sample results exceeding the 30 pCi/l action level. Upon further investigation, it was noted that none of the samples exceeding the 30 pCi/l action level triggered the 3:1 ratio action level. Despite none of the samples having exceeded both action levels, the observation that the licensee had not, in all cases, evaluated the results against both action levels was a potential problem. An inspection follow-up item is opened to ensure that all future results of samples are evaluated against applicable action levels.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee Cimarron Corporation

K. Morgan, Radiation Safety Officer

NEXTEP Environmental (contractor)

R. Callahan, Site Manager
L. Morgan, Health Physics Technician
L. Smith, Quality Assurance Coordinator

INSPECTION PROCEDURES USED

IP	88104	Decommissioning Inspection Procedure for Fuel Cycle Facilities
IP	88005	Management Organization and Controls
IP	83822	Radiation Protection
IP	88045	Environmental Protection
IP	88050	Emergency Preparedness and Fire Protection
IP	86740	Transportation Activities
IP	84850	Radioactive Waste Management and Waste Generator Requirements
IP	92701	Follow-Up

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

IFI 070-00925/0401-01: Section 15.2 states, in part, that analysis for Tc-99 shall be performed if the gross beta to gross alpha ratio exceeded: 3:1 and gross beta exceeded 30 pCi/l. There were no records to verify that the licensee had evaluated the beta:alpha ratio for sample results exceeding the 30 pCi/l action level. Despite none of the samples having exceeded both action levels, the observation that the licensee had not, in all cases, evaluated the results against both action levels was a potential problem. The IFI is opened to ensure that all future results of samples are evaluated against applicable action levels.

Closed

URI 070-00925/0301-01: Determine if the Cimarron ALARA Committee was required to approve changes to radiation protection procedures.

In a letter dated August 19, 2003, the licensee requested an amendment to revise License Condition 27(e) to remove the phrases; “and associated procedures” and “in the procedures presented,” from this section. The licensee requested the following

sentence be added: "All radiation protection program procedures or revisions to these procedures shall be approved by the RSO. Although the request is currently under review, the unresolved item will be closed.

Discussed

None

LIST OF ACRONYMS

ALARA	As Low As Reasonably Achievable
BTP	Branch Technical Position
CFR	Code of Federal Regulations
HP	health physics
IFI	Inspection Follow-up Item
mRem	milliRem
µR/hr	microRoentgen/hour
NVLAP	National Voluntary Laboratory Accreditation Program
pCi/l	picocuries per liter
QA	quality assurance
RPP	radiation protection plan
RSO	radiation safety officer
SNM	special nuclear material
SOP	standard operating procedure
SWP	special work permits
TLD	thermoluminescence dosimeters
TMW	temporary monitoring well
URI	unresolved item