

④ K4



**KERR-MCGEE NUCLEAR CORPORATION**

KERR-MCGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

September 22, 1978

*Release in  
Entirety*

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Glen D. Brown, Chief  
Fuel Facility & Material Safety Branch  
U.S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

RE: License No. SUB-1010  
Docket No. 40-8027

Dear Mr. Brown:

Your letter of August 31, 1978, enclosed a Notice of Violation and an I.E. Inspection Report No. 40-8027/78-01. Your letter asks that we respond to these documents. The attached discussion outlines the actions we are taking to correct the infractions cited and review activities already completed, near completion or planned.

We feel that Infraction #4 should have been classified in the basic category of a deficiency (a less severe classification) for two reasons: (a) because the 2,000 dpm/100 cm<sup>2</sup> value in question is an action level, not a limit which if exceeded means non-compliance and (b) efforts have been taken to reduce contamination levels as revealed in the attached discussion.

We also believe that Infraction #6 should be reclassified as a deficiency because action to obtain the sampling in question was in progress prior to your inspection. The details of this action are in the attached discussion.

We are hopeful that you find this reply a satisfactory response to your concerns.

Very truly yours,

*W. J. Shelley*  
W. J. Shelley, Director  
Regulation and Control

*R. P. Luke*  
R. P. Luke, Vice President  
Manufacturing and Marketing

~~401421(16)~~

WJS:RPL;hw

Enclosures

*6/2*

Attachment to Letter of September 22, 1978 from W. J. Shelley to  
Glen D. Brown.

Infraction 1(a)

"At the time of the inspection, twelve workers had not completed a respirator fitting and training program prior to the use of respiratory equipment, as required by Section C of Regulatory Guide 8.15".

This fitting and training has been accomplished for the twelve workers. We have now incorporated into our new employee orientation procedures the requirement that all uranium workers be fitted and trained to use respiratory protective equipment prior to their use of such equipment in the operating areas of the plant. This fitting and training is done in accordance with Section C of Regulatory Guide 8.15.

Infraction 1(b)

"Half-mask respirators are not being tested for fit with irritant smoke, prior to use, each time such equipment is donned as required by Table 1, Footnote f, of Regulatory Guide 8.15".

The sampling plant is the only area where half-masks are used for production or maintenance type work. A retraining session has been held for all sampling plant personnel. This training session has been documented. In addition, signs have been posted in the sampling plant reminding the employees of the need for the smoke tube test.

Infraction 1(c)

"Half-mask respirators are used with head straps over the hard hat which prevents straps from lying in their normal position next to the head as required by Section 13.5 of NUREG-0041, which is referenced in Section C.8.n of Regulatory Guide 8.15".

The above mentioned retraining session also covered the proper fitting of the half-mask with the head straps lying in their normal position.

Infraction 2

"Contrary to 10 CFR 20.203(c)(2), the ash receiver enclosure, a high radiation area in the fluorination area, was not equipped with entrance or access control devices or maintained locked when access was not required".

The ash receiver enclosures have been decontaminated to levels which will not require this area to be controlled as a high radiation area. More frequent surveys and decontamination efforts will be used to maintain these lower levels.

### Infraction 3

"Contrary to 10 CFR 21.21(a), appropriate procedures have not been adopted that would provide for the evaluation and reporting of defects in basic components as defined in Section 21.3 of 10 CFR 21".

"Procedures, as appropriate, will be developed to satisfy 10 CFR 21.21. These will be prepared by October 20, 1978.

### Infraction 4

"License Condition 9 requires that licensed activities be conducted in accordance with statements, representations, procedures and conditions stated in the License Application, Appendix A, and Section 2.0 of Appendix B".

### Infraction 4(a)

"During the period October 1977 to August 1978, surface contamination levels in the operating areas of the plant exceeded and remained above the control value of 2,000 dpm/100 cm<sup>2</sup> smearable activity as specified in Section 3.4.3 of Appendix A".

Section 3.4.3 of Appendix A, subsection 2, "Contamination Control" regarding operating areas states: "Routine measurements of surface contamination are made weekly...." "Cleanup activity is performed promptly when smearable alpha contamination exceeds 2,000 dpm/100 cm<sup>2</sup> in the operating areas".

Cleanup activity has been and is performed as committed, however, during the period cited, an abnormal frequency of uranium containment failures has occurred with the construction and start-up of new equipment installed to expand the production capacity. Repairs are made to stop leakage as soon as possible. Secondary control methods are used to prevent persons from receiving internal exposures of uranium.

These intermittent uranium leakage problems continue and cause the surface contamination. Correction of these unfavorable conditions combined with an improved housekeeping effort will reduce the contamination to more acceptable levels. This will be accomplished as follows:

- 1) Engineering studies have been conducted and are continuing regarding the prevention of packing leaks and pressure problems within various equipment.
- 2) Engineering will be performed to provide additional ventilation control if leak prevention methods cannot provide the desired containment.
- 3) Some new equipment has been installed or is on order as described in items 1-8 of our reply to your I.E. inspection report. More equipment for contamination control will be procured and installed as needed.
- 4) Administrative controls will be emphasized to accomplish more timely detection and repair of leaks. For example, documentation will be

made of corrective action taken as a result of a shiftwise inspection for uranium leaks and spills in the operating areas. Additionally, our work permit will be audited to improve contamination control measures when maintenance type work is performed on uranium containing equipment.

- 5) A major decontamination effort shall follow the accomplishment and implementation of the studies and additional controls described above.

11  
The time table for completion of the corrective measures are (a) Three months to achieve a significant reduction of containment problems, (b) A major decontamination effort during the fourth month and (c) Six months to achieve control with only occasional cases where contamination levels exceed 2,000 dpm/100 cm<sup>2</sup> by wipe test.

#### Infraction 4(b)

"Annual oral or written tests have not been given to mill workers to determine their understanding of radiation protection and uranium loss prevention as specified in Section 2.0 of Appendix B".

This testing will be completed during the next four months. This will be documented. Therefore, annual testing will be done.

#### Infraction 5

"License Condition 12 requires, in part, that soil samples be collected at 6000 foot distances from the plant in the cardinal compass directions and analyzed for uranium and fluoride. Contrary to this requirement:

Soil samples have not been collected at 6000 foot distances from the plant in the cardinal compass directions, since the renewed license was issued".

These samples have been collected and sent to the laboratory for analysis. Henceforth, each April and October, similar samples will be obtained and analyzed.

#### Infraction 6

"License Condition 15 requires that samples of bottom sediments be obtained at meaningful upstream and downstream points of the plant outfall into the Robert S. Kerr reservoir and analyzed as a means of evaluating the effect of the liquid plant effluent on aquatic biota.

Contrary to this requirement:

Bottom sediment samples have not been obtained and analyzed, since the renewed license was issued".

Arrangements for a consulting group expert in the techniques of this type of sampling were made at our Oklahoma City headquarters, prior to your inspection. Funding approvals were made on August 24, 1978. An initial sampling will be accomplished before the end of October, 1978.

On page five of the I.E. Inspection report, No. 40-8027/78-01, it is stated:

"The inspectors were unable to clearly determine whether the licensee's efforts to provide engineering and process controls were sufficient to comply with 10 CFR 20.103(b)(1). The item was left unresolved pending discussion with NRC Licensing."

Additional information to aid your determination follows:

- 1) As mentioned on page five, a rotary valve has been installed on the redrum hopper. This required replacement of the original hopper and installation of the rotary valve, electrical power for the valve, etc. The valve with the new hopper and drum adapter were placed in service on August 21, 1978. It has reduced spillage in this area.
- 2) To reduce airborne contamination in the denitration area, an AFE has been approved for a  $UO_2$  bucket elevator to replace the  $UO_2$  Redler (CO 3448). An abnormal number of breakdowns on the  $UO_2$  Redler Conveyor has caused excessive maintenance increasing the airborne contamination. The bucket elevator was ordered July 21, 1978. It will be installed as soon as possible after it arrives, which is now scheduled for November. This will be operated under a slight negative pressure to prevent spread of contamination.
- 3) A layout has been made for re-routing of the NOX headers to divide the denitrators so that the original units exhaust to the original nitric acid absorber and the expansion units exhaust to the expansion absorber to provide improved vacuum control to reduce airborne contamination caused by fluctuating pressures.
- 4) Cleon Treet, Conversion Engineering, has been assigned to work with Maintenance and Production personnel to study packing problems (packing materials, materials of construction, replacement frequency, etc.) to improve dust control on conveyors and agitators. Mr. Treet will be working in the field to aid Mr. Walt Spencer, Project Engineering, who was assigned to study this problem in the last ALARA meeting held August 16, 1978.
- 5) Engineering has designed, materials have been procured and fabrication has already begun on a refeed drum dumping and conveying system to feed redrummed material to the digest bins through a system operating at a negative pressure. This is expected to be placed in service in November, 1978.
- 6) As operating experience is gained with the bucket elevator (item 2) and the refeed conveyor (item 5) operating at negative pressures, it is proposed to design and install a bucket elevator to replace the L-type Redler Conveyors between the  $UF_4$  seal bins on 'A' and 'B' lines and the storage hoppers.
- 7) A ventilated enclosure has been provided around the drum dumping equipment in the sampling plant. This has resulted in a significant reduction of airborne contamination problems at the operators work location.

- 8) The engineering department will submit applications for expenditures to provide funds for procurement of contamination control equipment based upon a review of their studies. The studies will include the recommendations of the ALARA committee.