

70-3073



**KERR-McGEE CORPORATION**

KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

September 10, 1991

**Certified - Return Receipt**

Mr. Damon Wingfield  
Waste Management Service  
Oklahoma Department of Health  
P. O. Box 53551  
Oklahoma City, OK 73125

Re: Cushing Site

Dear Mr. Wingfield:

Pursuant to Section IX.2 of the Consent Order entered in State of Oklahoma v. Kerr-McGee Corporation, No. C-90-91-H, Kerr-McGee Corporation hereby submits the attached written progress report for the month of August, 1991.

Please call me at (918) 225-7753 if you have any questions about this report.

Sincerely,

James E. Cleveland  
Project Coordinator

JEC:lld

Attachment

- xc: Bill Fisher - U.S. NRC, Arlington, Texas
- William M. Kemp - Radiation Protection Service
- David N. Fauver - U.S. NRC, Washington, D.C.
- Kerr-McGee Citizens' Oversight Committee

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## CUSHING SITE REMEDIAL ACTION

Pursuant to Section IX.2 of Consent Order No. C-90-91H of the District Court of Payne County, State of Oklahoma, Kerr-McGee Corporation hereby submits the Cushing Remedial Action progress report for the month of August 1991.

## RADIOLOGICAL INVESTIGATION AND REMEDIATION

### Site Characterization

A detailed radiological survey of Skull Creek has been completed from the old railroad bridge east to the county road bridge. Elevated levels of radioactivity requiring additional investigation, were found 30 meters east of the railroad bridge in the creek bottom and on the creek bank. Earth moving equipment will be used to investigate these areas further and remove materials above the option 1 NRC limits.

Radioactive material in Skull Creek from the process building to the old railroad bridge has been removed. Both gamma level measurements and soil samples taken in the creek bottom and creek banks show radioactivity to be at background levels. Material with elevated levels of radioactivity removed from Skull Creek has been stockpiled southwest of the process buildings. These materials will be sampled and sorted in accordance with radioactivity levels and oil-grease content.

Information to be submitted with the application for the USNRC Special Nuclear Materials (SNM) license is being prepared. This material will be submitted with the SNM License application in September 1991.

### Processing Site - remediation and release

A radiological survey grid is being established on the walls, floors, ceiling and support beams of the second floor of the uranium process building for a final radiological release survey. Shot blasting continues on isolated areas of the floor of the uranium processing area. Removal of contaminated paint has been completed in the barrel house.

Decontamination of the concrete floor slab and footings removal from the thorium building have been completed. Soils under the thorium slab have been sampled in preparation for final removal of contaminated soils.

Radioactive analysis of materials stockpiled inside the barrel house showed uranium enrichment of U-235 to exceed the 5% shipping limit allowed under the Cimmaron License. This material was

blended with uranium contaminated material having a 3% enrichment value to lower the entire pile to less than 5%. Pending results of these samples there were no shipments of radioactive materials during the month of August 1991.

## REFINERY REMEDIATION

### Refinery Site Cleanup

Pipe has been ordered to replace active crude pipelines in preparation for the rerouting of Skull Creek at Pit 5. The pipe is scheduled for delivery at the Cushing site on August 9, 1991. Work has started on the east end of new Skull Creek location, however, completion will be delayed until the new crude pipeline is installed.

The pH in Skull Creek has been maintained above 6.0 with the use of limestone chat dams. Fine limestone materials were also mixed into acid seeps in the Skull Creek channel to help maintain pH control.

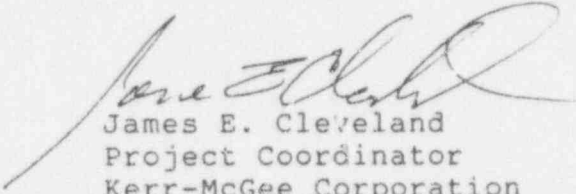
A monitor well has been completed into the main aquifer directly below the site in accordance with Phase I of the Remedial Investigation and Baseline Risk Assessment. This well will be sampled for contamination as agreed to by Kerr-McGee and Oklahoma State Department of Health.

### Other Activities

The Citizens Oversight Committee met at the Site on August 26, 1991. After a review of progress made on site a general tour was conducted.

FUTURE ACTIVITIES

1. Removal of radioactive contamination in Skull Creek continues.
2. Barreling and shipment of contaminated materials will start with the completion of radioactive analysis to determine enrichment values.
3. Rerouting of Skull Creek to prevent acid contamination from Pit 5 will continue.
4. Application for storm water runoff NPDES permit continues.
5. NRC License Application will be completed.



James E. Cleveland  
Project Coordinator  
Kerr-McGee Corporation

JEC:lld

70-3073



**KERR-McGEE CORPORATION**

KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

November 8, 1991

**Certified - Return Receipt**

Mr. Damon Wingfield  
Waste Management Service  
Oklahoma Department of Health  
P. O. Box 53551  
Oklahoma City, OK 73125

Re: Cushing Site

Dear Mr. Wingfield:

Pursuant to Section IX.2 of the Consent Order entered in State of Oklahoma v. Kerr-McGee Corporation, No. C-90-91-H, Kerr-McGee Corporation hereby submits the attached written progress report for the month of October, 1991.

Please call me at (918) 225-7753 if you have any questions about this report.

Sincerely,

James E. Cleveland  
Project Coordinator

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- xc: Bill Fisher - U.S. NRC, Arlington, Texas
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- David N. Fauver - U.S. NRC, Washington, D.C.
- Kerr-McGee Citizens' Oversight Committee

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## **CUSHING SITE REMEDIAL ACTION**

Pursuant to Section IX.2 of Consent Order No. C-90-91H of the District Court of Payne County, State of Oklahoma, Kerr-McGee Corporation hereby submits the Cushing Remedial Action progress report for the month of October 1991.

## **RADIOLOGICAL INVESTIGATION AND REMEDIATION**

### **Site Characterization**

The radiological survey of Skull Creek is complete and areas with elevated radioactive contamination were marked. Earth moving equipment was used to remove contaminated soils and sediments for stockpiling and further sorting. One small area east of the old railroad bridge on the south bank remains to be excavated.

An application for a special nuclear materials license was submitted to the Office of Nuclear Material Safeguards, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555 on October 17, 1991. Current work on radioactive cleanup and decontamination will continue under consent order C-90-91H pending the issuance of an NRC license.

### **Processing Site - remediation and release**

The two meter radiological grid survey on the second floor of the uranium process building is now complete. All areas on the second floor, floors, walls, roof and structural support beams, meet the final release criteria for unrestricted use. Work continues to remove contamination on the first floor of the building. Vacuum shot blasting and other decontamination procedures are being used to remove fixed uranium contamination from the floors walls and support beams.

The materials stockpiled inside the barrel house exceed five percent enrichment values of U-235. A letter requesting a variance was submitted to NRC on October 31, 1991. When a variance is granted by NRC, sorting and shipment of materials to Barnwell, North Carolina will be started.

## **REFINERY REMEDIATION**

### **Refinery Site Cleanup**

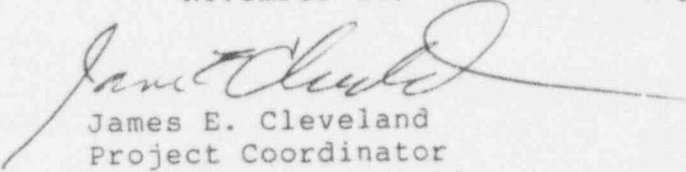
Crude pipelines were rerouted and excavation of the Skull Creek by-pass around pit 5 is approximately 80% complete. This by-pass, which will direct flows in Skull Creek away from acid seepage, will be completed by November 15, 1991. Accumulated rainfall on pits 1, 2 and 5 was collected, neutralized and

discharged to Skull Creek with temporary permission of the Oklahoma Water Quality Control Board.

An aquifer pump test was completed in the monitor well developed in the north west corner of the site as required by the Remedial Investigation Phase I work plan of December 3, 1990. Results of this test are being evaluated as part of the remedial investigation.

FUTURE ACTIVITIES

1. Application for storm water runoff NPDES permit.
2. Rerouting of Skull Creek.
3. Barreling and shipment of contaminated materials with approval of a variance by NRC.
4. Citizen's Oversight Committee is scheduled at the site on November 26, 1991 at 5:00 p.m.

  
James E. Cleveland  
Project Coordinator  
Kerr-McGee Corporation