



KERR-McGEE CORPORATION

KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

March 9, 1994

Mr. David Fauver
Office of Nuclear Materials Safety & Safeguards
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: Docket No. 70-3073
License No. SNM-1999

Dear Mr. Fauver:

We discussed both the upcoming unaffected area survey and report and the correlation of Kerr-McGee's gamma spectrum counter with Oak Ridge's in a recent telephone conversation. This letter follows up that conversation and requests your assistance in the counter correlation.

Kerr-McGee Corporation (KMC) is preparing a survey plan and report for portions of its Cushing refinery site. The purpose of the survey is to delineate certain areas of the site as unaffected areas, as defined in the "Manual for Conducting Radiological Surveys in Support of License Termination" (NUREG-5849). This will enable KMC to perform required acidic hydrocarbon sludge remediation in these areas without the extensive sampling and monitoring that would be required if these areas were considered affected by former nuclear operations or waste disposal.

Soil concentration data generated by KMC on its gamma spectrum analyzer will be compared with data generated by Oak Ridge Institute for Scientific Education (ORISE) personnel before the NRC will terminate the license. KMC desires to address the adequacy of data generated by KMC's on-site gamma spectrum analyzer. We believe it would be beneficial to correlate data generated by ORISE with data generated by KMC prior to counting many soil samples. This will identify potential problems associated with correlation of ORISE's data with KMC's.

Technicians at KMC's Technical Center have prepared splits of five samples prepared from soil taken from the Cushing site. One sample consists of some of the more contaminated soils found on site. The others are dilutions of the first. The radionuclides and concentrations are therefore typical of those that will be found on site. Cushing personnel have not been advised of the concentrations of the samples.

KMC desires to send samples to ORISE for analysis and correlate their results with the results generated by our on-site counter. This will enable us to determine how well ORISE data will correlate with data generated on site before we submit our survey report. As we discussed on the phone on March 1, this work should be coordinated through your office. Please advise us how to proceed with this comparison.

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The attached map identifies the areas we have surveyed as unaffected areas. Area 1 contains three acid sludge pits. The northern portion of Area 1 will be used to construct a disposal cell for neutralized sludges from pits 1, 2, 3, and 4. Pits 1, 2, and 3 will be treated and disposed of first, enabling KMC to cover the treated wastes before pit 4 material is placed in the cell. Non-radiologically contaminated and Option 1 treated pit 4 materials will then be placed in this disposal cell. Area 2 contains acid hydrocarbon sludge pit 5. A disposal cell for treated wastes from this pit will be constructed in Area 3. The proposed site for the low level radioactive waste disposal cell is in the far western corner of Area 3.

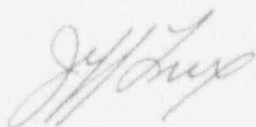
KMC proposes to submit a survey plan and report to justify the release of these areas from radiological sampling and monitoring during treatment and disposal of radiologically unaffected acid sludges. The unaffected areas will be fenced so that personnel working in affected areas do not have access to these four areas. Personnel and vehicles coming from radiologically contaminated areas will be surveyed prior to entering these unaffected areas. This will ensure that licensed materials will not be carried into unaffected areas during sludge pit remediation.

When it becomes necessary to transport or dispose of licensed materials in portions of previously unaffected areas, the fence will be moved to exclude newly affected areas from the remaining unaffected area. This would incorporate the portion of the disposal cell in Area 1 that will contain low levels of licensed materials (modified Option 1), the low level radioactive waste cell in Area 3, and haul roads into the affected areas of the site.

It is understood that when the final survey is performed for the site after completion of decommissioning activities, previously unaffected areas that were incorporated into affected areas will be re-surveyed. Areas that remained unaffected will not be resurveyed.

If you have any questions or comments, please call me at (405) 270-2694.

Sincerely,



Jeff Lux
Kerr-McGee Corporation

JL/jl

cc: R. Smith
E. Still
J. Ostmeyer
T. Moore