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May 11, 1983

MEMORANDUM FOR: J. A. Axelrad, Acting Director of Enforcement, Office of Inspection and Enforcement  
E. D. Flack, Office of Inspection and Enforcement  
R. G. Page, Chief, Uranium Fuel Licensing Branch  
W. A. Nixon, Project Manager, Uranium Fuel Licensing Branch  
P. G. Bollwerk, Attorney, Office of General Counsel

FROM: J. A. Hind, Director, Division of Radiological and Materials Safety Programs (DRMSP), RIII

SUBJECT: INSPECTION FINDINGS AT KERR MCGEE, WEST CHICAGO, ILLINOIS, IDENTIFYING ELEVATED <sup>212</sup>Pb CONCENTRATIONS

This memorandum provides a brief synopsis of the March-May 1983 inspection findings at the above facility. This case will be reviewed in depth during the May 12, 1983, meeting (11:00 AM, Room 319 (IRC) East-West Towers).

On March 2, 1983, NMSS notified Region III of apparent elevated <sup>212</sup>Pb airborne concentrations on the disposal site, based on an EPA review of licensee data in conjunction with an EPA study of thoron/radon daughters in the West Chicago area. A site inspection by Region III verified <sup>212</sup>Pb concentrations at Environmental Monitoring Station (EMS) 6, located in the restricted area approximately nineteen feet from the fence line, exceeded the Appendix B, Table II concentrations during the June 11-December 31, 1982, monitoring period by a factor of 1.70. Refer to the attached map. No monitoring stations were established in the unrestricted area in the general vicinity of EMS 6 during this period. EMS 6 is located approximately 100 feet south of the thorium residue tailings pile.

Inspector review of licensee data indicated none of the other nine stations reported <sup>212</sup>Pb concentrations above unrestricted limits when averaged over a year. Licensee management requested a meeting with Region III representatives to discuss remedial action. As documented in the March 16, 1983, Confirmatory Action Letter (CAL), the licensee agreed to install: 1) within 30 days, a system to suppress the <sup>212</sup>Pb onsite source term; and 2) within 14 days, four stations in the unrestricted area west of the disposal site to monitor <sup>212</sup>Pb levels. Concentrations at these new stations offsite have been followed since March 17, 1983. The average concentration at EMS 11 immediately outside the fence across from the tailings pile has exceeded the average concentration at EMS 6 by about 12% for the period from March 17 to May 5, 1983. Based on these data, Region III concludes that for the period when EMS 6 exceeded the unrestricted concentration onsite, EMS 11 exceeded the unrestricted concentration offsite.

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Region III staff propose two apparent items of noncompliance based on these findings: 1) 20.201(b) failure to make a survey/monitor radioactive material concentrations in order to comply with 20.106(a); and 2) 20.106(a) exceeding Appendix B, Table II limits in the unrestricted area based on NRC calculations and evaluations of data provided by the licensee. The purpose of this May 12, 1983, meeting is to determine if this type of evidence supports the second item of noncompliance and to determine the appropriate enforcement action.

J. A. Hind, Director  
Division of Radiological and  
Materials Safety Programs (DRMSP)

Attachment: Site Map

|         |              |            |            |         |  |  |  |
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| OFFICE  | RIII         | RIII       | RIII       | RIII    |  |  |  |
| SURNAME | Nicholson/rv | Schumacher | Paperiello | Hind    |  |  |  |
| DATE    | 5/11/83      | 5/11/83    | 5/11/83    | 5/11/83 |  |  |  |

RESIDENCE  
~ 1000'  
FROM PILE

