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SACRAMENTO MUNICIPAL UTILITY DISTRICT □ 6201 S Street, Box 15830, Sacramento, California 95813; (916) 452-3211
RJR 83-303

March 28, 1983

OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF HUMAN FACTORS SAFETY
U S NUCLEAR REGULATORY COMMISSION
WASHINGTON DC 20555

Pursuant to I&E Notice 83-05, Disposal under 10 CFR 20.302, the Sacramento Municipal Utility District respectfully requests evaluation of several optional disposal paths available for charcoal removed from air filtration units at the Rancho Seco Nuclear Generating Station. The material no longer meets absorption specifications for nuclear service and contains minimal but detectable radionuclides of plant origin.

The disposal technique most easily reviewed is land burial in a local county operated landfill. There are no restrictions at that site relative to the physical and chemical characteristics of the charcoal. The radiation levels, contamination levels and radionuclide types present are well below those provided as guidance for detectability under I&E Circular 81-07. Thus, we presume that this material could have been segregated as non-radioactive trash and sent to the county landfill, had we not subjected it to sensitive radionuclide analysis.

The second option of disposal suggested is reclamation by our supplier of nuclear quality charcoal. That supplier would reprocess the material by solvent extraction to remove the chemical absorbants and then reactivate the charcoal thermally. Solvent extraction would afford removal of KI-TEDA impregnants and result in an unknown factor of decontamination as the radionuclides present would be distributed between the solid and the solvent. Subsequent thermal treatment would likely redistribute residual radionuclides to internal surfaces of the solid. It is presumed that the radionuclides would be much less available for exchange after reclamation. The reprocessed material would not be isolated from other recovery operations, but no dilution is guaranteed. The reprocessed material could be specified to be utilized in solvent recovery operations as an end use. It is not acceptable for retreatment and use in our facility.

The third optional path at this time would be for use in air filtration at a nuclear facility operating under a California license and having less restrictive filter efficiency requirements, such that the material would serve their needs for a period they consider economic. In this respect,

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the charcoal would continue performing its intended function with a licensed facility responsible.

In your staff's assessment of the disposal techniques described, we would appreciate evaluation of material now in storage here. We also request definition of those parameters that would necessitate NRR reevaluation of these disposal processes as charcoal is removed from service in the future.

The material we now have stored consists of approximately 1000 ft³ (134 drums) which has been representatively sampled and analyzed to contain as a maximum Cs 137 at 7.71×10^{-6} $\mu\text{Ci}/\text{gram}$ and Co-60 at 4.88×10^{-5} $\mu\text{Ci}/\text{gram}$.

We appreciate your prompt review of this request. We have available further information on the various disposal options and have our Plant Health Physicist, Mr. J. Reese, available for consultation.



R. J. Rodriguez
Executive Director, Nuclear