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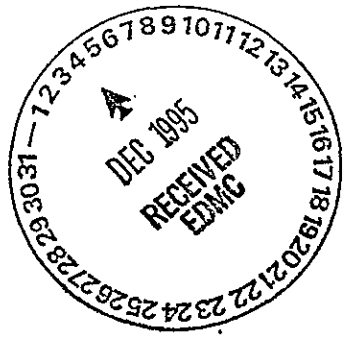

March 28, 1994

Mr. John Wagoner, Manager
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Department of Energy
P.O. Box 550 A7-50
Richland, WA 99352

Subject: HANFORD TANK WASTE REMEDIATION SYSTEM (TWRS); SCOPE OF ENVIRONMENTAL IMPACT STATEMENTS FOR; COMMENTS ON--

Dear Mr. Wagoner:

Several recent Yakama Nation letters to the Department of Energy DOE/RL pertain to NEPA documentation associated with the TWRS actions. The comments in these letters should be considered in conjunction with those herein. We recommend that a single TWRS EIS be prepared which allows integration of planning and actions. The EIS being considered for the new double shell tanks is not warranted. Alternative TRWS actions identified below should be evaluated, and the "new tank option" selected only if it is determined to be preferable.

COMMENTS--

1. Mobile rail cars should be considered for transportation and storage of tank wastes in addition to consideration of new double shell tanks and new underground transfer lines. Existing facilities for rail siding storage at East and West areas reprocessing facilities should be considered in addition to the establishment of new storage sidings with berms. Other options for sided storage of rail cars with radioactive materials should also be considered. Double containment to protect against leaks which makes use of liners and or concrete aprons under tank cars, would comply with RCRA requirements for storage of hazardous materials. The rail car storage option allows early extra storage capacity, flexibility to add storage as required, the ability to transport wastes without new pipelines, and the ability to store wastes of diverse compositions without mixing.

2. Direct volume reduction and stabilization of tank wastes by sugar denitrification should be considered in lieu of the creation of new double shell tanks. Dry cask storage of the stable salts resulting from this process also should be considered in connection with the significant volume reduction possible by this process. Information generated by the Hanford Works in the late 50s and early 60s, on radioactive waste that was processed in a sodium

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carbonate waste form should be reviewed and evaluated. Such options should be compared with the impacts of processing and separation suggested by the current Tri-Party Agreement. The current suggestions involve dilution of wastes with glass forming materials, large development costs for separation processes and at least $0.5 billion for new tanks.

2a. Options for vitrification plants should include consideration of components for the sugar denitrification as a pre-process step. Vitrification options utilizing sodium carbonate as a significant portion of the feed material should be considered along with other acceptable waste forms for carbon-14.

2b. Costs associated with large cask repository disposal of minimized wastes without the generation of a low activity waste stream as suggested in the Tri-Party Agreement, should be identified and compared with the vitrification of waste streams. Integration with civilian high-level radioactive waste management under DOE's cognizance should be accomplished. An appropriate systems design effort to accomplish this should be considered.

3. Alternative management schemes for liquid wastes in tanks should be considered to eliminate the generation of additional tritiated water wastes. (We estimate the tank wastes contain less than 12 million gallons of tritiated water, however, the current volume of tritiated water should be accurately specified in the subject EIS.) Thus, an alternative that does not dilute existing tritiated water wastes and provides for storage of the tritium until it decays should be considered.

3a. An alternative for management of tritium should consider the separation of tritium in waste water.

4. Removal of wastes from SY 102 to supplementary storage in existing double shell tanks or in the rail car storage suggested above should be considered to make room near SY 101. SY 102 could then be used for chemical dilution of hydrogen generating wastes from SY 101.

5. Vadose zone monitoring of tank farm soils could provide information for the future remediation effort. Management alternatives should include long-term performance assessments for tank operations and remediation efforts. The entire tank system, including tank structures and associated vadose zone and groundwater contamination, should be considered in the performance assessments.

6. Freeze barrier isolation of tank wastes during clean-out operations or in-tank processing should be considered for protection of the vadose zone and the saturated zone. Operational tank leak detection programs should be outlined and considered in an EIS to correct leak detection and tank monitoring deficiencies.

The current environmental assessment (EA) for C-106 sluicing operation does not adequately identify or consider the impact of tank leaks. (See Yakama Nation ER/WM Program letter to DOE/RL of February 24, 1994.)

7. Options to pumping liquid wastes from single shell tanks to avoid further leaks should be considered. This would provide additional safety margins to dry-out of wastes and dangerous in-tank conditions.

8. Options to the processing of tank wastes into two fractions (the high activity fraction and a low activity fraction) specified as a reference process in the Tri-Party Agreement, should be considered. Specifically, as recommended by the citizens TWRS Task Force, options that expedite the interim storage of wastes at Hanford or other monitored retrievable storage facility should be considered. In this regard the minimization of waste volumes should be considered as a optional design objective. (The sugar denitrification process referred to above is such a process.)

9. The integration of interim or long-term storage of tanks wastes with other wastes requiring shielding at Hanford should be considered in the EIS. The overall strategy for waste storage should be considered by a Site-wide EIS, which is consistent with the applicable programmatic EIS. For example, the effective dry storage of tank wastes, greater than Class C wastes (GTCCW), defense spent fuel, commercial spent fuel presently stored at Hanford, denatured special nuclear materials stored at Hanford, FFTF fuel, and cesium and strontium capsules should be considered for common mode cask storage. The subject TWRS EIS(s) should reflect a common mode storage scheme.

The overall plan for storage of Hanford wastes require significant shielding and/or permanent geologic repository disposal should drive the decision process for the TWRS wastes. Hence, an alternative for this action should be considered in the NEPA process. Effective integration of the various NEPA decisions is necessary and should be reflected in a "NEPA strategy".

10. Sodium nitrate and sodium nitrite purification and sugar denitrification of the purified sodium salts to reduce waste volumes with calcination of the remaining wastes sludges and salts should be considered as a method of treatment to effect volume reduction.

11. All options for treatment of wastes should include managing gaseous radioactive wastes rather than discharging these wastes to the environment. Management alternatives for carbon-14 and iodine-129 as well as tritium should include collection concentration and disposal. Processing options that avoid the dilution of these gaseous wastes with uncontaminated air streams should be considered.

12. Tank waste retrieval options should be considered that facilitate the complete remediation of tank farms including the tank structures and vadose zone contamination, if any.

13. TWRS actions that are affected by the requirement to restore the tank farms to a condition that will allow unrestricted usage at closure should be considered. In this regard there should be no de facto assumption in the decision process of identifying the preferred option for TWRS action. The TWRS EIS should be coordinated with decisions stemming from other NEPA decisions and the proper CERCLA actions connected with restoration of natural resources. Thus, the effective cleaning of tanks and selection of processes that risk contamination or injury to natural resources must be rationally determined and consistent with the goal of unrestricted future land use.

TWRS options for actions that are inconsistent with this objective should be identified early in the NEPA process so natural resources trustees can identify necessary restoration actions and costs.

Sincerely,

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