Confederated Tribes and Bands
of the Yakama Indian Nation

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Established by the
Treaty of June 9, 1855

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May 9, 1995

MAY 1995
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Mr. John Wagoner, Manager
Richland Field Office
Department of Energy
P.O. Box 550 A7-50
Richland, WA 99352

Dear Mr. Wagoner:

Subject: DEMOLITION WASTE LANDFILL (PIT 9); ENVIRONMENTAL ASSESSMENT (DOE/EA-0983); COMMENTS ON--

The Department of Energy (DOE) is proposing to use an existing alluvial gravel pit, Pit 9, as an inert/demolition landfill. Pit 9 has been excavated into sand and gravel deposits, approximately one mile west of the Columbia River, to a depth varying from 60 to 30 feet below ground surface. The uppermost unconfined aquifer in the area of Pit 9 lies potentially as little as 10 feet below the deepest part of the pit. The groundwater of the area has high transmissivity values of as much as 600,000 square feet per day and generally flows to the east, towards the river. The area of the disposal pit appears to lie within the zone of bank storage for the river. This means that when the river floods, water rapidly flows into the aquifer, raising the ground water level in relation to the flood water height. This may be ten's of feet depending upon the extent of the flooding and the distance and hydraulic conditions in the aquifer.

The proposed landfill would not be lined and would essentially use the existing gravel pit excavation without modification. DOE is proposing to fence the perimeter and construct a locking gate to control access to the landfill. The existing pit is approximately 1,550 feet long, 508 feet wide with an approximate volume of one million cubic yards. Depending upon flood conditions in the future, the contents of the pit may be inundated with groundwater, because of the location of the pit in the bank storage zone of the river.

However, the landfill is intended to receive only inert and demolition wastes from southern area demolition projects at the Hanford site. Presently, a nearby pit, Pit 10, has been used as a inert and demolition waste landfill. However, Pit 10 is presently approaching capacity and DOE desires to use Pit 9 to receive building demolition wastes over the next 20 years. In accordance

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with the "Minimum Functional Standards for Solid Waste Handling," *Washington Administrative Code (WAC) 173-304*, no hazardous, radioactive, dangerous, liquid or asbestos wastes would be disposed of into Pit 9. Demolition wastes consisting of concrete, brick, incidental wood, used asphalt and steel would be disposed into Pit 9. According to the Environmental Assessment (page 2-1), workers at the demolition sites would segregate the wastes so as to implicitly exclude wood and plaster (i.e., sheet rock or plaster board) that could produce gases or leachate during decomposition, under definition of demolition waste as given in WAC 173-304. However, exclusion criteria for wood and plaster are <u>not</u> explicitly stated in the document.

The document states that Biological and Cultural Resources Reviews have been completed for the proposed action and concludes that the proposed action would not lead to any substantial increase in human health effects. The document concludes that no threatened or endangered species, critical or sensitive habitat, cultural, or historical resources are expected to be adversely affected by the proposed action.

Yakama Nation Comments:

1. The environmentally responsible implementation of the proposed Inert/Demolition Waste Landfill at Pit 9 is contingent upon two key factors: protection of the groundwater quality and responsible reclamation and closure of the landfill. Protection of facility groundwater quality is of significant concern due to the relative close proximity of the waste to the groundwater (10 feet) through very permeable soils with minimal design features to minimize infiltration or leachate control. The primary control to minimizing leachate generation is the avoidance of placing hazardous, liquid, or gas generating wastes in the landfill. The one foot of soil is a minimal design for precipitation infiltration through the landfill waste. During the filling period, there will be little or no precipitation infiltration control. The design is totally dependent upon the absence of chemically reactive materials in the landfill to avoid leachate production from percolating water.

Therefore the EA should be modified to clearly specify the requirements upon which the impact assessment is based and these requirements should be implemented in the Pit 9 management. In addition the vunerable placememt of the disposal facility in the bank storage zone of the river should be noted to emphasize the necessity of not including chemically reactive materials in the facility.

2. The segregation of potentially reactive materials such as wood or plaster from inert debris is crucial to meeting the mission statement of the facility. Consequently, the avoidance of leachate generation in the landfill and subsequent contamination of the groundwater is only as effective as the efforts to keep non-inert materials out of the landfill. Furthermore, access to the site should rely on active measures to keep unauthorized dumping of non-inert materials in the landfill. The mere construction of a fence and locking gate should not be a substitute for active, on-site management and verification screening of loads to be delivered. There are no apparent assurances that the locking gate and fence actually secure the site at night and during operating days when apparently no on-site oversight is planned. The EA should be modified to clearly specify the requirements upon which the impact assessment is based, and these requirements should be implemented in the Pit 9 management.

3. The absence of any groundwater monitoring precludes verification that no leachate actually is generated by the landfill. Since no leachate collection, or containment is part of the design, verification of the performance of the design intent of the landfill is warranted. The EA should be modified to specify requirements for monitoring consistent with assuring the assumptions of the impact evaluation are met and these requirements should be implemented in the Pit 9 management.

4. Another concern relating to the landfill design as presently planned is the closure of the site. A complete description of the closure plan is not supplied for our evaluation. The minimal functional standard soil cap being only one foot thick does not provide an adequate base to support plant growth over the long term. Also concerns relating to final grade are not addressed. The topographic depression which will result, if less than the available pit volume is actually used, has not been addressed. These concerns address the long-term usability of the land by the Yakama Nation. Such impacts should be considered in the EA.

5. The primary factor for selection of Pit 9 for use as a demolition debris landfill is its low economic cost relative to other landfills. The DOE should be cognizant that the entire cost, including potential future environmental costs, be included in the decision-making and operation of the replacement construction debris landfill.

015678

Additional detailed comments are contained in the ATTACHMENT to this letter.

Sincerely,

Barbara Manuel

for Russell Jim, Manager
Environmental Restoration/Waste Management Program
Yakama Indian Nation

cc: K. Clarke, DOE/RL
C. Hansen, DOE/RL
M. Riveland, WA Ecol.
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Washington Gov. M. Lowry
U. S. Senator P. Murray
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ATTACHMENT: