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Confederated Tribes and Bands
of the Yakima Indian Nation

Established by the
Treaty of June 9, 1855

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October 12, 1994

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

Subject: HANFORD 300 AREA PROCESS TRENCHES CLOSURE PLAN; DISAGREEMENT WITH PROPOSED STRATEGY AND ACCEPTANCE CRITERIA FOR REMEDIATION; IDENTIFICATION OF ALTERNATIVE CRITERIA--

Dear Mr. Wagoner:

1. The remediation strategy described in Chapter 6 of the subject closure plan is unacceptable, since it does not establish an unrestricted end use criteria. Consistent with numerous other comments we have made relative to remediation at Hanford, we consider unrestricted use of the surface of remediated sites at 100 years past closure is a necessary criteria, with special allowances for inadvertent intruders of deeper contamination out to 500 years. The criteria referred to are the same as the criteria specified for commercial low-level radioactive waste burial sites following closure in 10 CFR 61.

Industrial use of the land over and around the subject trenches and in the 300 Area in general in the time frame out to 100 years past closure is likely unacceptable considering the disruption of Indian burial grounds in the area. As you know the Yakama Nation considers the disturbance of such sites unacceptable.

The subject plan does not address these time frames and thus, it is impossible to design or select appropriate remediation technology. For this reason we disagree with the proposed closure strategy and near term performance standards described. These standards may not be adequate to assure the unrestricted usage noted above.

2. We consider that scenarios associated with residential use of the ground along the river are necessary conditions to consider in a performance assessment/risk assessment pertinent to the entire 300 area. Thus, without consideration of the impacts of other 300 facilities requiring remediation in the future, it is impossible to determine acceptable remediation criteria for the subject trenches. Such strategy should be addressed in the Hanford Remedial Action Environmental Impact Statement.

3. Considering the potential for burial grounds in the 300 area, we consider that remediations that involve excavation of material not previously disturbed by Hanford operations should not be considered

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an acceptable alternative until other in-situ remediation technologies have been tried and demonstrated to be inadequate to retrieve contamination from the soils and ground water. Thus, the same strategy to be employed for the remediation of N-Springs and the ditches and cribs associated with N-Reactor Site contamination should be employed in the subject 300 Area remediation. Our comments regarding implementation of in-situ remediation technology at the N-Reactor Site are pertinent. See ATTACHMENT A for these comments.

4. A treatability test plan should be devised to develop the necessary in-situ remediation technology for the subject trenches. ATTACHMENT B relative to YIN comments on a B-Reactor Burial Ground remediation test plan are pertinent to the scope and content of an appropriate plan for the subject 300 Area Trenches.

5. Finally, both hazardous and radioactive contaminants should be clearly addressed in the strategy with appropriate acceptance criteria for impacts stemming from exposure to both types of contaminants. Applicable performance assessments/risk assessments addressing health based values for individuals, integrated health effects in a population and long-term genetic mutations in populations should be accomplished, forming the framework for selecting appropriate remediation technology. In particular the population consisting of Yakama Nation people should be considered.

Sincerely,

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

ATTACHMENT A: N-Springs Draft Expedited Response Action Proposal; Yakama Nation Disagreement with Proposal that Makes use of a Sheet Metal Piling Barrier--

ATTACHMENT B: YIN letter to DOE/RL of September 6, 1994,

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ATTACHMENT A

Confederated Tribes and Bands
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October 12, 1994

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

Subject: N-SPRINGS DRAFT EXPEDITED RESPONSE ACTION PROPOSAL; YAKAMA NATION DISAGREEMENT WITH PROPOSAL THAT MAKES USE OF A SHEET METAL PILING BARRIER; COMMENTS ON ALTERNATIVE TECHNOLOGY AND SOURCE REMEDIATION--

The following are the Yakama Nation's comments on the N-Springs Expedited Response Action Proposal (ERA) prepared by the Department of Energy. They supplement our comments in a letter of November 16, 1993 on N-Springs remediation technology.

1. The Yakama Nation disagrees with the introduction of sheet metal wall because of its potential impact to the cultural resources, for example, burial grounds, below grade in the area. We consider that the least impact technology to isolate contamination sources should be utilized. In this regard we would agree with freeze barrier technology as being a minimum impact technology. (We estimate the mechanical disturbance of the sub-surface conditions to be less than one-tenth of the impact of the proposed sheet metal piling being considered.)

2. The freeze barrier technology is useful for in-situ remediation of the source of contaminants in the N-Springs area in that it will allow isolation of sources both horizontally and vertically. The sheet pile barrier does not have this potential. The freeze barrier technology can be utilized to completely isolate the sources in the 100-N area (without dependence upon the uncertain vertical isolation afforded by incompletely characterized aquitards) and protect uncontrolled discharge to the river during significant variation in river levels from flood scenarios to low-river flows. (We note that the area at the N-Springs is part of the river's bank storage zone and, thus, subject to large groundwater fluctuations.)

3. Remediation of the source contaminant material in the 100-N area should not depend upon a scheme of digging up wastes and transportation to a future 600 area burial ground or other disposal facility away from the site. Such action should only be considered for wastes that cannot be remediated in-situ with other existing technology or technology anticipated in the next 30 years, with the

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objective of such remediation being to allow unrestricted access at the completion of remediation work. In any case where actions would remove waste for disposal or remediation at another site, permanent disposition (disposal) should not be planned unless the waste disposal site meets site-specific performance requirements that the Yakama Nation has identified as necessary for such facilities in previous correspondence.

Regarding planning for treatability test planning, we refer you to our recent letter of September 6, 1994 concerning the B-Reactor Burial Ground treatability test plan. (A copy is attached to this letter.)

4. Actions should not proceed with interim or final remediation until a risk assessment approved by the Yakama Nation in consultation with other natural resource trustees is accomplished and there is agreement with the course of action to be taken.

Sincerely,

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

cc: K. Clarke, DOE/RL
J. E. Rasmussen, DOE/RL
M. Riveland, WA Ecol.
G. Emison, U.S. EPA Reg. 10
D. Sherwood, EPA Richland
T. Grumbly, DOE/EM
Washington Gov. M. Lowry
U. S. Congressman J. Inslee
U. S. Senator P. Murray
DNFSB

ATTACHMENT: Yakama Nation letter of September 6, 1994

ATTACHMENT B

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Confederated Tribes and Bands
of the Yakima Indian Nation

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Established by the
Treaty of June 9, 1855

September 6, 1994

Mr. John Wagoner, Manager
Richland Operations Office
Department of Energy
P.O. Box 550 M/S A7-50
Richland, WA 99352

Subject: B-REACTOR BURIAL GROUND, 118-B-1; EXCAVATION "TREATABILITY TEST PLAN"; COMMENTS ON--

Dear Mr. Wagoner:

DOE/RL letter 94-ERB-126 of May 20, 1994 requested comments on action proposed to initiate the remediation of the 118-B-1 Burial Ground. The action is referred to as an "excavation treatability test" by the DOE/RL letter. 36439

We do not consider the nature of the testing activity being suggested in the DOE/RL letter is properly described as a treatability test. It is equivalent to the initiation of the remediation of the burial grounds and does not provide for testing waste to determine methods for detoxifying and/or reducing the mobility of the wastes for safe near-surface disposal or reducing the volume of the wastes to facilitate deep geologic disposal.

In Yakama Nation letter to DOE/RL of May 16, 1994, "Comments on the installation of a permanent cover over the 216-B-57 crib," we commented on the intended purpose of CERCLA regulations pertaining to treatability tests. We indicated disagreement with the use of the provisions to justify preparing a barrier for the B-57 Crib, stating that treatability tests are performed as a part of the feasibility study for the purpose of testing different site remediation options. The proposed actions most closely represents remedial investigations to determine the nature of the wastes or the initiation of the actual removal of the waste.

We recommend that the subject treatability test plan be entirely revamped to meet the intent of CERCLA provisions. In this regard the General rules at Section 9621 (b) (1) are pertinent:

> "Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances, pollutants, and contaminants is a principal element, are to be preferred over remedial actions not involving such treatment. The off-site transport and disposal of hazardous substances or contaminated materials without such treatment should be the least favored alternative remedial action where practicable treatment technologies are

available. The President shall (emphasis added) conduct an assessment of permanent solutions and alternative treatment technologies or resource recovery technologies that, in whole or in part, will result in a permanent and significant decrease in the toxicity, mobility, or volume of the hazardous substance, pollutant, or contaminant. In making such assessment, the President shall specifically address the long-term effectiveness of various alternatives. In assessing alternative remedial actions, the President shall, take into account:

(A) the long-term uncertainties associated with land disposal;
(B) the goals, objectives, and requirements of Solid Waste Disposal Act [42 U.S.C.A. sec. 6901 et seq.];
(C) the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents;
(D) short-and long-term potential for adverse health effects from human exposure;
(E) long-term maintenance costs;
(F) the potential for future remedial action costs if the alternative remedial action in question were to fail; and
(G) the potential threat to human health and the environment associated with excavation, transportation, and redisposal, or containment. ..."

Specifically, the large volume of metal wastes should be decontaminated and/or reduced in volume by a melter/slagger process like that in operation at Oak Ridge. The metal should be reused for waste packages for high-level wastes and other wastes requiring deep geological isolation. Disposal should only be considered, if contamination is such that burial is permissible with unrestricted use of the burial site at 100 years past closure. Barriers in such waste sites should not be assumed to be effective for protection of intruders of deeply buried wastes beyond 500 years, consistent with the provisions in 10 CFR 61 for disposal of near-surface disposal of low-level radioactive wastes.

As we have noted in the past, performance assessments should form the basis for determining an acceptable source term for any such burial site, including an EDRF or CAMU used in connection with the remediation of the B burial grounds. Usage scenarios involving Yakama Nation people or other non-Indian people, should be developed under consultation with the Yakama Nation. In particular scenarios involving irrigation of food crops and pasture crops at and around the burial site (ERDF OR CAMU) should be included in usage scenarios, consistent with the unrestricted use status in the future. Evaluations reflecting the requirements noted in (A) through (G) above must be accomplished with consideration of the design scope of the ERDF or CAMU associated with the B burial ground remediation under CERCLA. Only after such performance

assessments are accomplished can valid waste acceptance criteria be established for any ERDF or CAMU.

Wastes containing other hazardous materials should be washed to remove the hazardous constituents consistent with currently available technology. Washing at a centralized processing facility such as that discussed for the ERDF may be satisfactory, however appropriate testing to ascertain the acceptability of such centralized processing should be identified for the B burial ground following remedial investigation of the Site.

It is likely that treatability tests for some of the buried wastes will not be practical. For example, treating the highly radioactive control rods used in the reactors is likely not practical. Packaging for disposal in a deep geological repository for high-level radioactive wastes and spent fuel is the most likely solution for disposition of these wastes.

Other highly activated wastes in the burial grounds should also be identified and plans established for packaging similar to that suggested for the control rods. Disposal of such wastes near the surface at Hanford is unacceptable considering the long-term hazard they present to future generations. Such packaging should be included in a revised plan.

Finally we request that the comments of this letter and other letters to the DOE/RL concerning the criteria for cleanup, and disposal of wastes at Hanford be recognized in the preparation of proposals for remediation of other sites at Hanford.

Sincerely,

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

cc: K. Clarke, DOE/RL
P. Willison, DOE/RL
M. Riveland, WA Ecol.
G. Emison, U.S. EPA Reg. 10
T. Grumbly, DOE/EM
Washington Gov. M. Lowry
U. S. Congressman J. Inslee
U. S. Senator P. Murray
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