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[Advice # 75](#) From: George H. Sanders

97-EAP-712

Mr. Chuck Clarke  
Regional Administrator  
U.S. Environmental Protection Agency  
Region 10  
1200 Sixth Avenue  
Seattle, Washington 98101

Mr. Tom Fitzsimmons. Director  
State of Washington  
Department of Ecology  
P.O. Box 47600  
Olympia. Washington 98504

Dear Messrs. Clarke and Fitzsimmons:

**RESPONSE TO BOARD CONSENSUS ADVICE #75, ENVIRONMENTAL RESTORATION  
DISPOSAL FACILITY (ERDF) EXPANSION SEPTEMBER 5, 1997**

Enclosed is a proposed joint response to a Hanford Advisory Board Advice received on September 5, 1997, regarding ERDF expansion for signature by the U.S. Environmental Protection Agency (EPA) and the State of Washington Department of Ecology (Ecology). The response was developed between our staffs.

John Wagoner has signed the correspondence for the U.S. Department of Energy. Richland Operations Office. The correspondence is being provided to EPA for signature. The correspondence should then be forwarded to Ecology, attention Roger Stanley, for signature. If you have any questions. please contact me on (509) 376-6888.

Sincerely,

George H. Sanders, Administrator  
Hanford Tri-Party Agreement

EAP:FRM  
Enclosure

cc w/encl: D. Sherwood. EPA  
R. Stanley. Ecology

Ms. Marilyn B. Reeves, Chair  
Hanford Advisory Board  
723 The Parkway, Suite 200  
Richland, Washington 99352

Dear Ms. Reeves:

**BOARD CONSENSUS ADVICE #75: ENVIRONMENTAL RESTORATION DISPOSAL FACILITY (ERDF) EXPANSION, SEPTEMBER 5, 1997**

This is in response to the Hanford Advisory Board (HAB) Advice letter to Messrs. Chuck Clarke, U.S. Environmental Protection Agency (EPA), Tom Fitzsimmons, State of Washington Department of Ecology (Ecology), and John Wagoner, U.S. Department of Energy, Richland Operations Office (RL). The Tri-Parties would like to thank the HAB, especially members of the Environmental Restoration Committee, for providing advice and support for the expansion of ERDF. The HAB's continued involvement with this project has helped make it a success.

Enclosed is a detailed breakdown of the life-cycle costs for the ERDF facility as requested by the Environmental Restoration Committee, through the HAB. Also included are the assumptions used in developing the costs. As requested by the HAB, in future evaluations the Tri-Parties will provide detailed life-cycle cost comparisons for disposal at ERDF with other treatment and disposal technologies.

The Tri-Parties will continue to provide progress updates on the ERDF expansion and waste disposal operations. If you have any questions, please contact Ms. Pam Innis, EPA, at (509) 372-4919, Mr. David Olson, RL, at (509) 376-7142, or Mr. Jack Donnelly, Ecology, at (509) 736-3013.

Sincerely,

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John Wagoner, Manager  
U.S. Department of Energy  
Richland Operations Office

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Tom Fitzsimmons, Director  
State of Washington  
Department of Ecology

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Chuck Clarke, Regional Administrator  
U.S. Environmental Protection Agency  
Region 10

Enclosure

cc w/encl: Admin Record (200-DF-1)

L. D. Arnold, FDH  
M. L. Blazek, OOE  
J. W. Donnelly, Ecology  
M. K. Harmon, EM-442  
P. Innis, USEPA  
R. Jim, Yin  
S. D. Liedle, BHI  
R. Patt, OOE

D. Pawaukee, Nez Perce  
 D. R. Sherwood, EPA  
 J. Wilkinson, CTUIR  
 M. A. Wilson, Ecology

### ERDF Life Cycle Costs

The life cycle unit cost for each of the five major project elements in 1997 constant year dollars is shown below. This cost estimate is based on the accompanying assumptions and these assumptions are an integral part of the cost estimate.

	<u>Cost/Ton</u>	<u>Cost\$/Yd<sup>3</sup></u>
Construction	\$ 8.0	\$14.1
Transportation	15.8	27.7
Disposal	15.1	26.5
Direct Project Support	1.3	2.3
Closure	4.5	7.9
Total Cost	\$44.9	\$78.5
Total Cost* (less Distributables and G&A)	\$36.5	\$63.8

\*Note: Distributable and G&A cost factor is approximately 23%.

### Assumptions

#### General

1. Life cycle costs include all costs related to the construction, operations and eventual capping or closure of the ERDF facility. ERDF is assumed to contain 6 cells.
2. Waste volumes in the 6 cells are based on an engineering evaluation. The total volume in six cells will meet the current projected waste disposal requirements for remediation waste.
3. Waste tonnage is based on 1.75 tons per cubic yard of available volume. This factor represents the average density of waste currently placed in the ERDF facility.
4. The cost per ton is presented in FY 1997 dollars. Costs prior to FY 1997 are escalated at 2.7% annually and costs after FY 1997 are discounted at 2.7% per year.
5. All estimates and actual costs to date include direct distributables and G&A costs of approximately 23%. The final average life cycle cost figures are presented both with and without this overhead factor.

6. Direct Project Management Support (PM/CM) is included in the cost calculations.
7. Leachate treatment costs are not included. Processing of leachate at the Effluent Treatment Facility (ETF) is currently direct funded.
8. Excludes remediation costs.

### **Waste Operations**

1. Waste operations costs are based on actual costs through July 1997.
2. Costs beyond July 1997 are based on projected waste volumes and current Waste Disposal subcontract terms and conditions.
3. Routine ground water and environmental air monitoring are included as normal operations costs.
4. Transportation of leachate to the ETF is included in the Waste Disposal subcontractor's cost.

### **Transportation**

1. Transportation costs based on actual costs through July 1997.
2. Subcontractor costs beyond July 1997 are based on projected waste volumes and current Transportation subcontract terms and conditions.
3. Cycle times to and from the remediation sites are based on actual experience to date.
4. The transportation estimate is based on ton-mile calculations using 18.7 tons of waste per shipment.
5. Transportation subcontract costs include all required material and equipment.

### **Construction**

1. Actual costs for Cells 1 & 2 construction include initial design costs, regulatory requirements and site infrastructure requirements.
2. Construction and design estimates for Cells 3 & 4 and 5 & 6 are based on cost experience from Cells 1 & 2. Estimates have been adjusted to exclude any one time costs for initial regulatory, design and site infrastructure.

### **Closure**

1. Final cover will be a RCRA C cover. Cover costs are based on engineering estimates developed in FY 1996.
2. The interim cover assumes placement of a plastic liner with 2 feet of clean soil.
3. Clean soil for cover requirements is available at the ERDF.

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*For questions or comments, please send [email](mailto:Hanford_Advisory_Board@rl.gov) to Hanford\_Advisory\_Board@rl.gov*

*Response to HAB Consensus Advice #75 (September 4-5, 1997)*

*Subject: HAB Consensus Advice on TPA ERDF Expansion*

*Letter from Tri-Parties, dated October 8, 1997*

*URL: <http://www.hanford.gov/boards/hab/response/075.htm>*

*Last Updated: 02/20/2001 15:10:17*