PB96-963107
EPA/ESD/R10-96/145
November 1996

EPA Superfund Explanation of Significant Difference for the Record of Decision:

Hanford (100, 200, 300 & 1100 Areas) (USDOE) Benton County, WA 7/30/1996

157366

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10, HANFORD PROJECT OFFICE
712 Swift Boulevard, Suite 5
Richland, Washington 99352

UNITED STATES DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
P.O. Box 550
Richland, Washington 99352

WASHINGTON STATE DEPARTMENT OF ECOLOGY
1315 W. 4th Avenue
Kennewick, Washington 99336-6018

USDOE Environmental Restoration Disposal Facility, Hanford Site, Benton County, Washington Explanation of Significant Difference (ESD)

RECEIVED
AUG - 7 1996
Environmental Cleanup Office

INTRODUCTION

Site Name and Location

USDOE Environmental Restoration Disposal Facility (ERDF), Hanford Site, Benton County, Washington

Lead and Support Agencies

The U.S. Environmental Protection Agency (EPA) is the lead regulatory agency on ERDF, the U.S. Department of Energy (DOE) is lead agency for operation and management of ERDF, and Washington State Department of Ecology (Ecology) is the support agency (the Tri-Parties).

Statutory Citation for an ESD

In Section 117(c) of the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA), provisions are made for addressing and documenting changes to the selected remedy that occur after the Record of Decision (ROD) is signed. This ESD documents the changes to the selected remedy in accordance with CERCLA Section 117(c). Additionally, since significant, non-fundamental changes are being made to the original remedy, documentation procedures specified by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Section 300.435(c)(2)(i), have been followed.

Need for ESD

The ROD for the ERDF provides for disposal of remediation waste from CERCLA past-practice units.

Because of the similarity of contaminants and waste types, it has become apparent that ERDF disposal is an option that should be available in evaluating cleanup options for RCRA past-practice operable units and closing treatment, storage, and disposal facilities (TSDs) at Hanford, as well as for CERCLA past-practice units. Waste generated during past-practice investigations should also be available for disposal in the ERDF. In addition, leachate generated at ERDF can be used to help suppress fugitive dust and aid in waste compaction at ERDF. These changes have the potential to reduce cleanup costs and administrative paperwork, while maintaining or increasing the level of protection to human health and the environment.

Administrative Record

This ESD and supporting information is part of the Administrative Record for Hanford Environmental Restoration Disposal Facility, as required by 40 CFR 300.825(a)(2), and is available to the public at the following locations:

ADMINISTRATIVE RECORD (Contains all project documents)

U.S. Department of Energy
Richland Operations Office
Administrative Record Center
2440 Stevens Center
Richland, Washington 99352 (Official Record)

EPA Region 10
Superfund Record Center
1200 Sixth Avenue
Park Place Building, 7th Floor
Seattle, Washington 98101

Washington State Department of Ecology
Administrative Record
719 Sleater-Kinney Road SE
Capital Financial Building, Suite 200
Lacey, Washington 98503-1138

INFORMATION REPOSITORIES (Contain limited documentation)

University of Washington
Suzzallo Library
Government Publications Room
Mail Stop FM-25
Seattle, Washington 98195

Gonzaga University
Foley Center
E. 502 Boone
Spokane, Washington 99258

Portland State University
Branford Price Millar Library
Science and Engineering Floor
SW Harrison and Park
P.O. Box 1151
Portland, Oregon 97207

DOE Richland Public Reading Room
Washington State University, Tri-Cities
100 Sprout Road, Room 130
Richland, Washington 99352

The notice of the availability of the ESD was published in the *Hood River News*, the *Seattle Times P/I*, the *Spokesman Review-Chronicle*, the *Tri-City Herald*, and the *Oregonian*.

SITE HISTORY

The DOE's Hanford Site was listed on the National Priorities List (NPL) in July 1989 under CERCLA as amended by the *Superfund Amendments and Reauthorization Act of 1986* (SARA). The Hanford Site was divided and listed as four NPL sites: the 100 Area, the 200 Area, the 300 Area, and the 1100 Area.

In anticipation of the NPL listing, DOE, EPA, and Ecology entered into a Hanford Federal Facility Agreement and Consent Order (Tri Party Agreement) in May 1989. This agreement established a procedural framework and schedule for developing, implementing, and monitoring response actions at Hanford.

Restoration of the Hanford Site is expected to result in the generation of wastes requiring further management. The Tri-Parties recognized the need for a centralized waste facility because of desires expressed by the public to expeditiously remove waste from the sites located adjacent to the Columbia River. The ROD for the ERDF was signed by the Tri-Parties on January 20, 1995. The remedy selected by the ERDF ROD specifies construction and operation of two disposal cells for Hanford remediation waste. The two landfill cells must meet RCRA minimum technical requirements (MTRs) for hazardous waste landfills (40 CFR Part 264, Subpart N) and must also provide sufficient leachate storage capacity to ensure uninterrupted operations.

The ERDF can be used to dispose of waste generated during the cleanup of the 100, 200 and 300 Areas at the Hanford Site. The 1100 Area ROD, issued in September 1993, specifies that waste generated during remediation will be disposed of offsite. Treatment as an alternative to ERDF disposal and as a precondition to ERDF disposal is to be considered in selecting remedies for the individual operable units. Waste disposed of at ERDF must meet CERCLA Section 121(d) ARAR requirements and satisfy ERDF Waste Acceptance Criteria (BHI 00139, Rev. 2, February 1996). The ERDF Waste Acceptance Criteria has been approved by the EPA, in consultation with Ecology, and is in the Administrative Record.

The waste acceptance criteria incorporates state and federal regulations as well as DOE Orders. The criteria limit ERDF waste acceptability primarily in the areas of chemical concentration, radioactivity level, treatment standards, and waste form. The CERCLA decision document selecting as a remedy the disposal of the waste into ERDF shall specify treatment requirements. Public input into those decisions

will be sought during public involvement periods for the operable unit cleanup proposals.

The selected ERDF site covers a maximum of 4.1 km^2 (1.6 mi^2) on the Central Plateau at an elevation of 195 to 226 m (640 to 740 ft) above mean sea level, approximately in the center of the Hanford Site, southeast of the 200 West Area and southwest of the 200 East Area. The ERDF will serve as the receiving and disposal facility for most waste generated from cleanup actions where disposal on the Central Plateau is the selected remedy and where waste meets ARARs and waste acceptance criteria. Some waste generated during cleanup (e.g., transuranic waste) and "as generated" wastes (i.e., wastes generated from a production process rather than as part of site remediation) will not be acceptable for ERDF disposal and shall be handled elsewhere.

Only waste that originates from CERCLA or Resource Conservation and Recovery Act (RCRA) cleanup actions on the Hanford Site will be placed in the ERDF. The waste is expected to consist of hazardous/dangerous, radioactive, mixed waste (containing both hazardous/dangerous and radioactive waste) and minor amounts of polychlorinated biphenyl (PCB) and asbestos waste. The ROD provides that the mechanism for approving disposal of RCRA past-practice remedial waste into the ERDF will be determined by the Tri-Parties.

In the ERDF ROD, the Tri-Parties determined that the 100, 200, and 300 Area NPL sites are to be treated as one site under Section 104(d)(4) of CERCLA, and that therefore a permit would not be required to transfer waste from these sites to ERDF. In response to the ERDF Proposed Plan, several members of the public expressed concern that offsite (i.e., non-Hanford) wastes may be shipped to Hanford and disposed of in ERDF. In response to these comments, the Tri-Parties clarified that the ERDF would be used solely for disposal of wastes generated from the Hanford cleanup effort; there was no intent or authorization for ERDF to receive or manage wastes generated from offsite sources. No determination has been made to include non Hanford wastes as part of the site under CERCLA Section 104(d)(4). EPA reconfirms this position in this ESD. Thus, the wastes types covered by this ESD are limited to Hanford cleanup wastes only.

DESCRIPTION OF SIGNIFICANT DIFFERENCE

Hanford Cleanup Waste

Three general types of Hanford cleanup wastes have been identified for which clarification is needed regarding eligibility for placement in ERDF. These three waste types are:

- Waste generated as a result of site characterization and treatability tests during investigations at past-practice operable units;
- Waste from decontamination and decommissioning of Hanford surplus facilities;
- Waste generated as a result of cleanup activities at Hanford RCRA sites undergoing closure.

Further clarification regarding these waste types is presented below.

Investigation-Derived Waste. A variety of wastes have been produced as a result of site characterization activities associated with the Hanford cleanup effort in the 100, 200 and 300 Areas. Additionally, a

variety of treatability test wastes have been generated from the evaluation of potential cleanup alternatives. These investigation-derived wastes (IDW) include drilling muds, cuttings from test pit and well installation; purge water, soil and other materials from collection of samples; residues (e.g., ash, spent carbon) from testing of treatment technologies; miscellaneous treatability test and investigative equipment such as piping, tanks, etc.; contaminated personal protective equipment (PPE); and solutions (aqueous or otherwise) used to decontaminate non-disposable protective clothing and equipment. IDW is currently being stored in drums at a central area within the operable unit boundaries. Many of these drums have been stored in this manner since the beginning of the operable unit investigations. With the exception of liquid-bearing IDW, most of these wastes meet the ERDF waste acceptance criteria. Liquid-bearing IDW can generally be processed via stabilization, evaporation, or other methods to satisfy the ERDF waste acceptance criteria.

Disposal options have been evaluated as part of the 100 Area and 300 Area operable unit feasibility studies. The 100 Area and 300 Area RODs that have been issued specify that the ERDF is the selected disposal site for waste generated during cleanup activities. IDW generated during investigations of the operable units is similar in nature and contamination to the remedial action waste. This ESD clarifies that investigation-derived wastes that have been generated during RCRA Facility Investigation/Corrective Measures Studies or from CERCLA Remedial Investigation/Feasibility Studies in the 100 and 300 Areas may be placed in the ERDF provided the waste acceptance criteria are met. This would provide for safe and environmentally protective disposal of this material. No additional regulatory decision document is necessary.

Limited evaluations have been completed for operable units within the 200 Area. The 200-ZP-1 Record of Decision does not specifically address IDW disposal. IDW for 200-ZP-1 shall be addressed with the remedial design documentation for that action. The remainder of the IDW stored within the 200 Area totals approximately 500 cubic yards. This material consists primarily of PPE and drill cuttings from well installation. The Tri-Parties believe that this waste would be more safely managed by disposing of the material in ERDF. The IDW shall meet the established waste acceptance criteria for the ERDF prior to disposal. No additional regulatory decision document is necessary.

Investigation-derived waste generated during future activities will be addressed as part of the "Strategy for Management of Investigation-Derived Waste". This document is included in Appendix F of the Tri-Party Agreement. Decisions concerning the disposition of IDW generated as part of future investigations or treatability studies shall be addressed in future RI/FS and RFI/CMS work plans and CERCLA proposals and decision documents.

Decontamination and Decommissioning Wastes. On May 22, 1995, the Department of Energy (DOE) and the EPA issued a joint nationwide policy pertaining to the decommissioning of DOE facilities under CERCLA. This policy establishes a framework for conducting such actions, and generally commits to utilization of the CERCLA process in situations where the building or structure contains a hazardous substance posing a substantial threat of a release into the environment. The DOE is undertaking a variety of activities that will be subject to this policy, including the stabilization and transition of several buildings and structures on the Hanford site. It is anticipated that these decommissioning actions will generate wastes consisting of radioactively or chemically contaminated construction debris such as concrete, rebar, steel plate, timbers, etc. Additionally, decommissioning activities may generate waste streams consisting of materials such as contaminated piping and tanks associated with operations formerly conducted in the facilities.

Waste resulting from Hanford decommissioning and decontamination activities may be disposed of in ERDF in accordance with a remedial action ROD or removal action memoranda issued in accordance with CERCLA and the NCP after an opportunity for public comment, provided that the waste meets the ERDF waste acceptance criteria.

RCRA Past-Practice and Closure Waste. As stated in the ERDF ROD, "numerous sites that normally would have been designated CERCLA sites were administratively designated as Resource Conservation and Recovery Act (RCRA) past-practice sites." The ROD also indicated the Tri-Parties intent to place such wastes in ERDF, provided that the waste acceptance criteria are met and that the disposal is in accordance with the legal requirements. The mechanism for accommodating such disposal was to be determined by EPA, Ecology, and the Department of Energy. The Tri-Parties have determined that such waste may be placed in the ERDF in accordance with a remedial action ROD or removal action memoranda issued in accordance with CERCLA and the NCP after an opportunity for public comment, provided that the waste acceptance criteria are met.

In addition to remediation wastes from RCRA past-practice sites, the ERDF will also be eligible to receive certain wastes generated during closure activities at inactive RCRA treatment, storage, and disposal units at Hanford. Closure of these units will typically generate wastes consisting of contaminated soil and structural components such as contaminated concrete, rebar, piping, equipment, etc. In many instances the TSD units are located within an operable unit which is being addressed under the CERCLA or RCRA past-practice process, and the TSD closure will result in cleanup wastes that are, for all practical purposes, indistinguishable from wastes resulting from CERCLA or RCRA past-practice cleanup activities. These TSD closure wastes may be placed in ERDF in accordance with a remedial action ROD or removal action memoranda issued in accordance with CERCLA and the NCP after an opportunity for public comment, provided that the ERDF waste acceptance criteria are satisfied. This determination is consistent with the approach already being implemented, on a case-by-case basis, at the Hanford site. For example, contaminated soils from closure of the 300 Area Process Trenches (RCRA TSD units) will be disposed of in ERDF in accordance with the ROD for the 300 Area CERCLA operable units.

RCRA Authorities Not Affected. Implementation of the decision to place specific RCRA past-practice or closure wastes or radioactive, non-RCRA waste from inactive TSDs in ERDF will continue to be done on a case-by-case basis. A determination under CERCLA to place RCRA waste in the ERDF shall in no way affect DOE's responsibility to meet the requirements of RCRA, including conditions of the RCRA permit or closure plans. Approval of the lead regulatory agency is required before waste from any RCRA past-practice site or TSD may be placed in ERDF.

Under this ESD, the Tri-parties may agree, in accordance with the Tri-Party Agreement Action Plan, Section 5.4, to redesignate operable units. However, redesignation is not required.

ERDF Leachate

The ERDF is a double lined landfill meeting RCRA 40 CFR Part 264 Subpart N landfill and Subpart F groundwater monitoring requirements. The ERDF is expected to generate leachate that requires management within a regulatory framework. The ERDF ROD currently requires sufficient leachate storage capacity to ensure uninterrupted operations, complying with 40 CFR Part 264, Subpart N. Additionally, the ROD states that leachate collected at the landfill will be managed at the 200 Area Effluent Treatment Facility (ETF), located in the 200 East Area, or at another approved facility.

The Tri-Parties have determined that the ERDF leachate may be collected and stored at the ERDF for use at ERDF, as appropriate. Appropriate uses are limited to dust suppression and waste compaction. Compaction of the waste is necessary to minimize the potential for subsidence and to support a final surface cover (See 40 CFR Section 264.310). It may be necessary to add water to the waste in order to achieve the required compaction results. Dust suppression is required to prevent wind dispersal of waste placed in the ERDF (See 40 CFR Subpart 264.301(j)).

The leachate must be sampled prior to use to ensure compliance with Land Disposal Restrictions (LDRs), ERDF waste acceptance criteria, and other health based limits (whichever is more restrictive). The volume of leachate used to suppress dust and compact waste within the landfill must be equal to or less than the minimum volume of water that otherwise would be necessary for these purposes. The ERDF will utilize ETF or some other authorized facility for wastewater requiring treatment or exceeding annual operation needs.

Using leachate within the ERDF trench is not considered a fundamental change from the ROD. The leachate will be used to meet applicable landfill regulatory requirements. Using leachate within the trench in this manner is consistent with the nature of the original remedy.

The Tri-Parties believe that the use of leachate in this way would not constitute a violation of Section 3004(l) of RCRA, as amended. The legislative history of Section 3004(l) only discusses the use of hazardous waste for road treatment. As long as the leachate is being returned to the landfill from which it was derived to satisfy other regulatory requirements (minimize subsidence and dust suppression) and meets LDR, ERDF waste acceptance criteria, and health based limits, the Tri-Parties do not believe it is being "used for dust suppression" in the sense prohibited by Section 3004(l).

In addition, the use of leachate may not satisfy the requirement of RCRA 3004(c) which specifies that "the placement of bulk or non-containerized liquid hazardous waste or free liquids contained in hazardous waste in any landfill is prohibited". The leachate is classified as hazardous waste due to the RCRA F039 listing (40 CFR Section 261.31(a)). To the extent that Section 3004(c) of RCRA applies to the use of ERDF leachate for dust suppression and waste compaction, it is being waived pursuant to Section 121(d)(4)(D) of CERCLA.. The Tri-Parties have determined that the placement of water in ERDF is necessary in order to satisfy applicable RCRA landfill dust suppression and waste compaction requirements, and that the use of ERDF leachate that meets LDR requirements, ERDF waste acceptance criteria, and other health based limits (which ever is more restrictive) will attain a standard of performance that is equivalent to that which would be obtained by the use of water. The Tri-Parties intend to seek a delisting of the leachate after sufficient data is available to support the determination that this is a non-hazardous material. Upon delisting of the leachate, the referenced requirement will no longer apply as the liquid will be classified as non-hazardous.

A summary of the differences between the original remedy and the modified remedies for these items is shown below:

Original Remedy	Modified Remedy
Under the current regulatory framework, the use of the ERDF is limited to wastes generated from past-practice units on the Hanford Facility provided the ERDF waste acceptance criteria are satisfied. Disposal must be authorized by a CERCLA decision document (ROD or Action Memorandum).	Any Hanford environmental cleanup waste generated as a result of CERCLA or RCRA cleanup actions (decontamination and decommissioning wastes, RCRA past-practice wastes, IDW) is eligible for disposal provided it meets the ERDF waste acceptance criteria and the appropriate decision documents are in place. Additionally, non-process wastes (e.g., contaminated soil, debris) generated from closure of inactive RCRA TSD units may be placed in ERDF provided that (1) the closure wastes are sufficiently similar to CERCLA or RCRA past-practice wastes placed in ERDF, (2) the ERDF waste acceptance criteria are satisfied, and (3) the appropriate CERCLA decision documents are in place. Revision of the RCRA Permit and closure plans may be required.
Collect all ERDF leachate for management at the 200 Area Effluent Treatment Facility or other approved facility	Collect all ERDF leachate for use within the ERDF trench. Leachate in excess of ERDF use requirements or acceptable contaminant levels will be sent to ETF or another approved facility for management.

BASIS FOR SIGNIFICANT DIFFERENCE

The rationale for the changes to the original remedy are discussed in this section.

Hanford Cleanup Waste

Making Hanford cleanup waste eligible for ERDF disposal, regardless of whether it comes from a CERCLA or RCRA past-practice unit or from the closure of an inactive TSD unit will provide a cleanup option that will be protective and which may be the most cost effective. It will also help ensure a consistent approach to cleanup of RCRA and CERCLA sites at Hanford. The ERDF is a landfill meeting RCRA Subpart N landfill and Subpart F groundwater monitoring requirements. Additionally, the ERDF has strict guidelines, specified in the waste acceptance criteria, which must be met to dispose of any waste in the facility.

This ESD for the ERDF ROD has been issued to clarify the eligibility of waste generated during cleanup of the Hanford site. Since decontamination and decommissioning waste, RCRA past-practice waste, and certain RCRA wastes from inactive TSD facilities associated with *Hanford cleanup activities* are sufficiently similar to other Hanford CERCLA remediation waste, the Tri-Parties believe the ERDF should be considered as a disposal facility for these waste. The ERDF disposal option should be evaluated along with other cleanup alternatives in accordance with the NCP.

Additionally, investigation-derived waste resulting from RCRA Facility Investigation/Corrective Measures Studies or from CERCLA Remedial Investigation/Feasibility Studies and Treatability Studies must be managed in a more cost efficient and protective manner. The EPA believes that, in order to achieve these goals, IDW should be disposed in the ERDF (provided that the technical standards of the waste acceptance criteria are met). This ESD serves as notification of the intent of disposing of currently stored IDW in ERDF. Investigation- derived waste generated during future activities will be addressed as part of the "Strategy for Management of Investigation-Derived Waste". This document is currently included in Appendix F of the Tri-Party Agreement. Decisions concerning the disposition of IDW generated as part of future investigations or treatability studies shall be addressed in future CERCLA proposals and decision documents after an opportunity for public comment.

Disposition of ERDF Leachate

The use of ERDF leachate within the trench is protective of human health and the environment. This method minimizes the need to store and transport liquids over Hanford Site roads to the ETF, thereby significantly reducing the haul distance and associated operating costs. Further, reuse within the trench will reduce the processing costs associated with using ETF as well as the need for delivering additional water to the ERDF site.

Managing leachate for use in the trench is consistent with waste minimization and resource conservation practices. Using the leachate within the trench returns a waste to a beneficial use, minimizing a waste stream and associated processing requirements. Additionally, leachate reuse conserves resources by reducing the clean water volume required for dust suppression.

SUPPORT AGENCY COMMENTS

Consistent with EPA guidance, the Washington State Department of Ecology reviewed the ESD. Suggested changes were incorporated into the text. Ecology supports this action and the implementation of the described changes to the ERDF Record of Decision.

AFFIRMATION OF STATUTORY DETERMINATIONS

The amended remedy is protective of human health and the environment, will comply with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action or attain a waiver where justified, and is cost effective. The use of leachate in ERDF may not satisfy the requirement of RCRA Section 3004(c) which specifies that "the placement of bulk or non-containerized liquid hazardous waste or free liquids contained in hazardous waste in any landfill is prohibited." To the extent that Section 3004(c) of RCRA applies to the use of ERDF leachate for dust suppression and waste compaction, it is being waived pursuant to Section 121(d)(4)(D) of CERCLA. The Tri-Parties have determined that the placement of water in ERDF is necessary to satisfy applicable RCRA landfill dust suppression and waste compaction requirements, and that the use of ERDF leachate that meets LDR requirements, ERDF waste acceptance criteria, and other health based limits (whichever is more restrictive) will attain a standard of performance that is equivalent to that which would be obtained by the use of water. This remedy utilizes permanent solutions to the maximum extent practicable for this site. Treatment of cleanup wastes will be addressed in the operable unit decision documents and remedial action activities. As a consequence, the statutory preference for treatment as a principal element will be addressed in these future documents rather than in this ESD.

This remedy will result in hazardous substances remaining onsite above health-based levels; therefore, a review will be conducted within 5 years after commencement of this action to ensure that the remedy continues to provide adequate protection of human health and the environment.

PUBLIC PARTICIPATION ACTIVITIES

A public comment period was held from June 3 to July 2, 1996. Public comments were considered prior to issuing the ESD. All submitted written comments are contained in the Administrative Record for the ERDF. Responses to the public comments received during the public comment period are included in the Responsiveness Summary (Appendix A) and were considered during the development of this ESD.

Signature sheet for the Explanation of Significant Differences to the Record of Decision for the USDOE Hanford Environmental Restoration Disposal Facility Remedial Action between the United States Department of Energy and the United States Environmental Protection Agency, with concurrence by the Washington State Department of Ecology.

Chuck Clarke

Chuck Clarke
Regional Administrator, Region 10
United States Environmental Protection Agency

7/30/96
Date

Signature sheet for the Explanation of Significant Differences to the Record of Decision for the USDOE Hanford Environmental Restoration Disposal Facility Remedial Action between the United States Department of Energy and the United States Environmental Protection Agency, with concurrence by the Washington State Department of Ecology.

John D. Wagoner

John D. Wagoner
Manager, Richland Operations
United States Department of Energy

7/26/96
Date

Signature sheet for the Explanation of Significant Differences to the Record of Decision for the USDOE Hanford Environmental Restoration Disposal Facility Remedial Action between the United States Department of Energy and the United States Environmental Protection Agency, with concurrence by the Washington State Department of Ecology.

Mike Wilson
Program Manager, Nuclear Waste Program
Washington State Department of Ecology

Aug 1, 1996
Date

APPENDIX A

EXPLANATION OF SIGNIFICANT DIFFERENCES RESPONSIVENESS SUMMARY

USDOE HANFORD ENVIRONMENTAL RESTORATION DISPOSAL FACILITY
EXPLANATION OF SIGNIFICANT DIFFERENCES
RESPONSIVENESS SUMMARY

The U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and the State of Washington Department of Ecology (Ecology) (the agencies) held a public comment period from June 3, 1996 through July 2, 1996 for interested parties to comment on the Environmental Restoration Disposal Facility (ERDF) Explanation of Significant Differences.

A responsiveness summary has been prepared for the purpose of providing the agencies and the public with a summary of citizens comments and concerns about the site, as raised during the public comment period, and the agencies' response to those comments and concerns.

I. RESPONSIVENESS SUMMARY OVERVIEW. This section briefly describes the background of the Hanford Site and the ERDF and outlines the changes to the ERDF Record of Decision (ROD).

II. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS. This section provides a brief history of community interest and concerns regarding the ERDF.

III. SUMMARY OF MAJOR QUESTIONS AND COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND THE AGENCIES' RESPONSES TO THOSE COMMENTS. This section summarizes both oral and written comments submitted to the agencies during the public comment period, and provides the agencies' responses to those comments.

IV. REMAINING CONCERNS. This section discusses community concerns that the agencies should be aware of as they prepare to undertake operation of the ERDF.

I. RESPONSIVENESS SUMMARY OVERVIEW

SITE BACKGROUND

The DOE's Hanford Site was listed on the National Priorities List (NPL) in July 1989 under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). The Hanford Site was divided and listed as four NPL sites: the 100 Area, the 200 Area, the 300 Area, and the 1100 Area.

In anticipation of the NPL listing, DOE, EPA, and Ecology entered into a Hanford Federal Facility Agreement and Consent Order (Tri Party Agreement) in May 1989. This agreement established a procedural framework and schedule for developing, implementing, and monitoring response actions at Hanford.

Restoration of the Hanford Site is expected to result in the generation of wastes requiring further management. The Tri-Parties recognized the need for a centralized waste facility because of desires expressed by the public to expeditiously remove waste from the sites located adjacent to the Columbia River. The Record of Decision (ROD) for the ERDF was signed by the agencies on January 20, 1995. The remedy selected by the ERDF ROD specifies construction and operation of two disposal cells for Hanford remediation waste. The two landfill cells must meet RCRA minimum technical requirements (MTRs) for hazardous waste landfills (40 CFR Part 264, Subpart N) and must also provide sufficient leachate storage capacity to ensure uninterrupted operations.

The ERDF can be used to dispose of waste generated during the cleanup of the 100, 200 and 300 Areas at the Hanford Site. The 1100 Area ROD, issued in September 1993, specifies that waste generated during remediation will be disposed of offsite. Treatment as an alternative to ERDF disposal and as a precondition to ERDF disposal is to be considered in selecting remedies for the individual operable units. Waste disposed of at ERDF must meet ARARs and satisfy ERDF Waste Acceptance Criteria (BHI 00139, Rev. 2, February 1996). The ERDF Waste Acceptance Criteria has been approved by the EPA, in consultation with Ecology, and is in the Administrative Record.

The waste acceptance criteria incorporates state and federal regulations as well as DOE Orders. The criteria limit ERDF waste acceptability primarily in the areas of chemical concentration, radioactivity level, treatment standards, and waste form. The CERCLA decision document selecting as a remedy the disposal of the waste into ERDF shall specify treatment requirements. Public input into those decisions will be sought during public involvement periods for the operable unit cleanup proposals.

The selected ERDF site covers a maximum of 4.1 km^2 (1.6 mi^2) on the Central Plateau at an elevation of 195 to 226 m (640 to 740 ft) above mean sea level, approximately in the center of the Hanford Site, southeast of the 200 West Area and southwest of the 200 East Area. The ERDF will serve as the receiving and disposal facility for most waste generated from cleanup actions where disposal on the Central Plateau is the selected remedy and where waste meets ARARs and waste acceptance criteria. Some waste generated during cleanup (e.g., transuranic waste) and "as generated" wastes (i.e., wastes generated from a production process rather than as a part of site remediation) from active TSDs will not be acceptable for ERDF disposal and shall be handled elsewhere.

Only waste that originates from CERCLA or Resource Conservation and Recovery Act (RCRA) cleanup actions on the Hanford Site will be placed in the ERDF. The waste is expected to consist of hazardous/dangerous, radioactive, mixed waste (containing both

hazardous/dangerous and radioactive waste) and minor amounts of polychlorinated biphenyl (PCB) and asbestos waste. The ROD provides that the mechanism for approving disposal of RCRA past-practice remedial waste into the ERDF will be determined by the agencies.

A summary of the differences between the original remedy and the modified remedies for these items is shown below:

Original Remedy	Modified Remedy
Under the current regulatory framework, the use of the ERDF is limited to wastes generated from past-practice units on the Hanford Facility provided the ERDF waste acceptance criteria are satisfied. Disposal must be authorized by a CERCLA decision document (ROD or Action Memorandum).	Any Hanford environmental cleanup waste generated as a result of CERCLA or RCRA cleanup actions (decontamination and decommissioning wastes, RCRA past-practice wastes, and IDW) is eligible for disposal provided it meets the ERDF waste acceptance criteria and the appropriate decision documents are in place. Additionally, non-process wastes (e.g., contaminated soil, debris) generated from closure of inactive RCRA TSD units may be placed in ERDF provided that (1) the closure wastes are sufficiently similar to CERCLA or RCRA past-practice wastes placed in ERDF, (2) the ERDF waste acceptance criteria are satisfied, and (3) the appropriate CERCLA decision documents are in place. Revision of the RCRA Permit and closure plans may be required.
Collect all ERDF leachate for management at the 200 Area Effluent Treatment Facility or other approved facility	Collect all ERDF leachate for use within the ERDF trench. Leachate in excess of ERDF use requirements or acceptable contaminant levels will be sent to 200 Area Effluent Treatment Facility, or another approved facility for management.

II. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS.

Presentations were made to the Hanford Advisory Board and the Confederated Tribes and Bands of the Yakama Indians. The primary concerns of these groups focused on mitigation of habitat and facility closure. These concerns were addressed previously within the Remedial Investigation/ Feasibility Study and the Record of Decision and Responsiveness Summary for the ERDF.

III. SUMMARY OF MAJOR QUESTIONS AND COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND THE AGENCIES' RESPONSES TO THOSE COMMENTS.

Written and oral comments received during the public comment are presented in this section. The person and group affiliation providing the comment is also identified. Responses follow each comment or a series of comments.

A. GENERAL

Comment 1. A member of the general public commented that they support the proposed modified remedy for ERDF, stating that they believe that the changes reflect a sound technical and cost-effective resolution for integrating provisions of the numerous environmental laws. They continued by stating that this action should be publicized to other states and EPA regions and adopted at other cleanup sites where appropriate.

Response: Thank you for your comment. The agencies believe that changes specified in the ESD offer an effective solution to the management of waste generated as a result of the cleanup of the Hanford Site.

Comment 2. A member of the general public made the following comment:

> I believe that the Tri-Parties should require:

Comment 2a. The shrub-steppe habitat be preserved to the greatest degree possible, with highest priority being given to the highest quality habitat. This protection should be given whether this ESD is approved or not.

Response: The ERDF site is composed of a mix of habitat types, ranging from mature shrub-steppe habitat at the eastern end, to previously disturbed areas, such as the REDOX lay-down yard, at the western end. The agencies intend to limit disturbance during environmental remediation as much as possible, but we must expect difficult trade-offs between competing priorities in the future. DOE intends to minimize disturbance to shrub-steppe habitat to the extent possible by expanding the disposal facility only as needed.

Comment 2b. The ESD should require early mitigation of the habitat destroyed by construction of ERDF and damaged by the operation of ERDF and intrusion of invader species into the habitat.

Response: DOE has developed a Mitigation Action Plan for mitigation of the ERDF in coordination with the Hanford Natural Resource Trustee Council. Although DOE agrees that concrete habitat mitigation commitments are necessary, it is difficult to commit to specific mitigation measures until DOE and Trustees come to agreement on a site wide mitigation strategy. Additionally, the final size of the ERDF landfill will depend entirely on the decisions made at the source operable units in the future. Because of these uncertainties, the Mitigation Action Plan will probably be periodically revised and supplemented as additional engineering and biological data become available.

As part of the site wide environmental restoration mitigation strategy, Colorado State University has been contracted to develop a revegetation plan. The draft plan is expected in August with final issuance expected in December. The Hanford Natural Resource Trustee Council is involved with the development of the revegetation plan and is currently reviewing the annotated outline.

In addition, a Biological Resource Management Plan (BRMaP) and the Biological Resource Mitigation Strategy (BRMiS) are being developed. The BRMaP provides the Department of Energy and its contractors with a consistent approach to protect biological resources and to monitor, assess, and mitigate impacts from site development, environmental cleanup and restoration activities, as well as approaches to better manage total resources. The BRMiS provides Hanford Site project managers, planners and engineers, and resource managers with the concepts and information necessary to implement the requirements and guidance contained in the BRMaP specific to mitigation at the Hanford Site (via rectification and/ or compensation).

Comment 2c. If RCRA wastes are allowed into ERDF, that the cells used for such waste

- be designed to meet the detailed requirements of RCRA in addition to CERCLA requirements;
- be monitored as required under RCRA as well as CERCLA;
- be closed in accordance with the requirements of both RCRA and CERCLA;
- have the same post-closure monitoring and response requirements as RCRA in addition to the CERCLA requirements. If the wastes do migrate from ERDF in the ground and endanger groundwater, as I expect they will, USDOE must be required at that future date to exhume ERDF and treat the wastes properly.

- revegetate only with species and seed-stock native to the Hanford site. All foreign or invader species must be prohibited.

Response: In accordance with the Record of Decision, the ERDF design complies with EPA RCRA Subtitle C and Washington Department of Ecology requirements for hazardous waste landfills. The ERDF trench is designed to meet the RCRA minimum technology requirements (MTRs) and includes a composite bottom liner and a leachate collection and recovery system. The ROD specifies that the closure plans and post closure monitoring for the ERDF shall satisfy the substantive portions of RCRA. The requirements for the surface cover have not yet been developed in detail. At this time, a RCRA-compliant cover has been selected for the closure of the ERDF. Prior to selection of a final cover design, the public will be given the opportunity to comment.

Comment 3. A member of the general public made the following comments:

Comment 3a. The newspaper release and the ESD package discussed that "only waste generated during Hanford cleanup is eligible for disposal in the ERDF". I wanted to voice my support for this proposal because I believe this to be an important limitation placed onto ERDF operations to obtain public support.

Response: Thank you for you comment.

Comment 3b. I would like the Tri-Parties to better clarify what types of waste will not (be) accepted into ERDF. The ESD on page 4 discusses that "some waste generated during cleanup (e.g., transuranic waste) and 'as generated' waste (i.e., highly concentrated wastes present in a for essentially' as generated from a production process') from active TSDs will not be acceptable for ERDF disposal and shall be handled elsewhere". Specifically, I would like clarification on what the Tri-Parties have in mind pertaining to "as generated" wastes. I am unaware of any wastes at Hanford that would fit into this category based upon how EPA uses this term in the Hazardous Waste Identification proposed rules (see 60 FR 66344 and 61 FR 18780). EPA uses this term in (the) Federal Register preamble to describe the situation where a material becomes a waste for the first time. At Hanford, I don't believe there are any production processes that would generate highly concentrated wastes.

Response: In general, wastes that could be considered newly generated or 'as generated' waste produced at Hanford would include any waste coming from process vessels, vehicle maintenance, or laboratories (spent reagents, etc.). These wastes cannot be disposed of in the ERDF and must be sent to another facility for disposal.

Comment 3c. I would like to propose elimination of the public comment process requirement for a waste to be disposed of at ERDF. In reading the ESD, it appears that any waste destined for ERDF must undergo some sort of public comment process. This process does not seem necessary if the waste acceptance criteria can be met for the landfill. Since the acceptance criteria document has underwent public comment, we may be able to eliminate a redundant process.

Response: The public comment process described within the ESD is specific to CERCLA cleanup actions. Under CERCLA, proposals for the selection of a remedy at a site shall be made available for public comment. Disposal at the ERDF site may be a part of that remedy.

Comment 3d. I am interested to know how the Tri-Parties addressed listed waste designation and reuse issues to establish the ERDF leachate management recommendations. I am in full support of the proposal contained in the ESD for leachate management. What I cannot understand is how the Land Disposal Restrictions will be met while at the same time the ERDF leachate will be applied to the land. As I understand, the administrative process of a delisting petition according to the RCRA regulations is not required based upon an ARAR determination and the ESD will be used to address any CERCLA delisting paperwork requirements for single source leachate and/or multi-source leachate. If this is the case, my understanding is that there would be no Land Disposal Restrictions to be concerned about.

Response: Although delisting of leachate is anticipated when sufficient characterization data are available, the agencies are not taking such action at this time. The leachate will be used for dust suppression and compaction activities within the trench. Contaminant limits have been established to manage the leachate in a protective manner. The Land Disposal Restriction (LDR) limits for waste waters specified in the RCRA regulations are included in the established leachate limits. If the leachate concentrations exceed the LDR limits it cannot be used in the ERDF trench and must be treated at an approved facility.

IV. REMAINING CONCERNS.

Issues and concerns that the agencies were unable to address in detail during remedial action activities include the following:

- **Mitigation** - A mitigation action plan was prepared to address mitigation requirements for the ERDF. The Hanford Natural Resource Trustees were consulted during development of this plan. The implementation of this plan is pending the completion of the Biological Resource Mitigation Strategy.

RESPONSIVENESS SUMMARY
LIST OF COMMENTORS

Written Comments:

Gordon J. Rogers
1108 N. Road 36
Pasco, WA 99301

Dirk Dunning
P.O. Box 2356
Gresham, Oregon 97030

Anthony Miskho
514 N. Hawaii Pl.
Kennewick, WA 99337