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Confederated Tribes and Bands  
of the Yakama Indian Nation

Established by the  
Treaty of June 9, 1855

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To <b>Bob McLeod</b>	From <b>Dave Einan</b>
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August 16, 1996

Project Manager - Dave Einan  
 USDOE Hanford 300 Area  
 300-FF-1 and 300-FF-5 Operable Units  
 Hanford Site  
 Benton County, Washington

**RE: 90% DRAFT - Mitigation Action Plan; 300-FF-1 Operable Unit Remediation**

Greetings too; Dave Einan:

As you are aware Lester and I are in the process of coming on board for the Yakama Indian Nation under an internship program.

Comments have been made for the first time and are still new, so please understand.

Your response would be beneficial in helping us throughout the commenting period.

Respectfully,

*Lester Spencer*  
*Roxann Sockzehlg*



90% DRAFT  
MITIGATION ACTION PLAN  
300-FF-1 OPERABLE UNIT REMEDIATION

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## INTRODUCTION

A record of Decision (ROD) was issued date xx/xx/xxxx, for remediation of waste sites in the 300-FF-1 Operable unit (OU) in the 300 Area of the Hanford Site. The selected remedy for 300-FF-1 & 300-FF-5 includes Selective Excavation and Disposal of contaminated soil and debris [what kind of contaminated soil and what kind of debris?] from the process waste units, Excavation and Removal of Burial Ground 618-4, & Institutional Controls for Groundwater [the institutional controls include what?] This mitigation action plan explains how cultural resources will be managed and how revegetation for these remedial activities will be planned. [Who will be involved with the actual mitigation part for revegetation, if it so happens to be a culturally significant floral resource?]

Actions required by the ROD will result in the disturbance of areas of recovering vegetation. This plan presents a strategy for limiting these disturbances and identifies an opportunity for revegetating the 618-4 site to native species. [these native species include what? What did the area predominantly contain?] The 300-FF-1 OU is being planned for continued industrial land use as identified in the Proposed Plan (DOE-RL 1995 a). The 300 Area and surrounding land has also been identified by the Future Site Uses Working Group (1992) for Industrial and Research/Office use and development. However, the northern part of the 300-FF-1 OU has been proposed as a Resource of Concern by the Draft Biological Resources Management Plan (BRMAP) (DOE-RL 1996).

## 2.0 BACKGROUND

This section describes the cultural and natural resources at the waste sites and nearby support areas that are expected to be affected.

### 2.1 Project Area

This project involves the remediation of the following waste sites\*:

waste site	description	approximate size (acres)
618-4	burial ground	3
process trenches and process trenches spoils	process water disposal	2
north process pond	process water disposal	7
south process pond	process water disposal	8
landfills 1a, 1b, & 1d	burial grounds	5

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\*The following waste sites in the 300-FF-1 OU are expected to be clean, based on the RI data and will be sampled as part of final verification sampling. However, these sites may be recontoured and revegetated as part of final restoration activities. These sites are the sanitary sewer system and trenches area, the ash pits and filter backwash area, and landfill 1c.

**Definition of RI data, also, where does this data come from? How much will the area be recontoured and revegetated?**

The 618-5 burial ground is not included in the ROD, and will be addressed as part of the 300-FF-2 OU remediation. All operations, transportation, and material handling facilities are currently planned to occur in previously disturbed areas, such as the soil borrow area south of the 618-4 burial ground. **[These operations include? All?]**

## 2.2 Cultural resources

## 2.3 Natural resources

Small areas dominated by native plant species exist within the 300-FF-1 OU boundary, mainly in the vicinity of and including the 618-4 burial ground. Currently the 618-4 burial ground has a recovering mid-serial community of shrub, perennial grass, annual grass species with fair quality habitat on sandy soils **[definition of fair quality]**. The habitat in this area has been proposed as a Level III resource of concern by the Draft BRMAP (DOE-RL 1996, in review). Level III biological resources are of concern because of their state listing; potential for federal or state listing; unique or significant value for plant, fish, or wildlife species; special administrative designation; or environmental sensitivity. The reason for Level III designation in the vicinity of the 618-4 burial ground is the presence of shrub-steppe vegetation. The general area has been identified as habitat for Columbia yellowcress, a nearby riparian species of concern, which does not reside in the arid soils adjacent to the wastes in 300-FF-1.

The Draft BRMAP does not identify a resource level of concern for the southern portion of 300-FF-1 OU because of the disturbance and relative lack of vegetation. The Process Trenches, North Process Pond, and South Process Pond have a cobble surface that is generally bare of vegetation, but with some white and/or yellow sweet clover within the cobble. The site perimeters of the Process Trenches, North Process Pond, South Process Pond, and the landfills 1a, 1b, & 1d have a cover of predominately cheatgrass and rabbitbrush.

The proposed material handling facility south of the 618-4 burial ground has poorly established Siberian and thickspike wheatgrass. This particular area has been excavated to provide radiologically clean soils over the 618-2 and 618-3 burial grounds. West of the borrow area lies an intact sagebrush community with perennial grass species within the understory. This community, however, is a waste site in the 300-FF-2 OU, designated as the Aluminum Recycling Handling area, and is radiologically posted as a soil contamination area.

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### 3.0 Mitigation actions

Mitigation refers to a series of prioritized actions designed to minimize or lessen potential project impacts on cultural or natural resources. The first choice of mitigation is *to avoid the impact entirely; for instance, the project can be moved away from significant habitat or cultural resources.* Mitigation may also involve *minimizing the impact, rectifying the impact afterwards, and/or compensating for significant impacts.* These mitigation actions have been developed following direction in the 300-FF-1 Proposed Plan (DOE-RL 1995a) that the future land use will be industrial.

#### 3.1 Cultural resource mitigation

#### 3.2 Natural Resource mitigation

- Ecological surveys will be performed in project areas, before activities begin, to identify and avoid species and habitats of concern [**Can the surveys that are done be monitored?**]
- New roads and support facilities will be limited to existing disturbed areas
- Prudent fire control practices will be exercised while minimizing the vegetation disturbances for firebreaks (especially in years with heavy growths of cheatgrass and other weeds that could rapidly carry wildfire to areas with sagebrush). Plant communities dominated by perennial grasses and shrubs are more resistant to wildfire than areas dominated by annuals such as tumbleweed and cheatgrass
- any needed backfill materials should come preferentially from excavated backfill, existing spoils piles, ash piles, and lastly from current borrow sites [**The actual location of these backfill and piles, where would they be coming from?**]
- Where currently vegetated areas must be removed (for example, on Landfills 1a, 1b, and 1d), the topsoil (0.25-0.5 m depth) will be stockpiled, with the associated vegetation, and reused for the topsoil during site restoration. Before reuse, it will be surveyed to ensure any residual contaminants are below cleanup levels

The following site -specific mitigation measures will be undertaken.

- Before the 618-4 burial ground is to be exhumed, 15-20 bitterbrush growing on areas to be disturbed will be transplanted beyond the east perimeter of the burial ground along the current dirt road. [**When transplantation has not occurred according to plan and the bitterbrush dies, will they still be transplanted any way?**] Because this area has cultural sensitivity, the holes to be dug for transplants will be monitored during excavation. If cultural concerns arise for this area, alternate sites may also be limited by the possibility of inadvertently moving contamination with the soil surrounding the roots.

This action should be done in fall or winter after the seasonal precipitation has begun and the should are moist. Additional water will be added to the planting holes to settle the soil and ensure adequate moisture. The transplanting will depend on the depth of cover and likelihood of reaching contamination while removing the plants. The success of the effort will be monitored for five years using a control areas to evaluate variables such a the height of the transplanted shrub versus survivability, and a report prepared at the end of the monitoring period. [How far will the control area be from the actual site?]

- Other native plant species that will be lost from site restoration activities can be offered to other groups for transplanting [Define other groups.] However, efforts must be made to ensure contaminants potentially near the roots of these plants are not also reused, and that workers are protected while collecting plants on the unremediated waste site.
- Clean topsoil (0.25 - 0.5 m depth) form the 618-4 burial ground will be stockpiled with associated vegetation near the project operational area and reused for the topsoil at the end of the 618-4 remediation project. [Will this topsoil also be monitored?]
- The area disturbed for the material handling area will be limited to the minimum size necessary. When the area is no longer needed for support facilities, it will be replanted with native perennial species if available or with non native crested and/or Siberian wheatgrass for stabilization.

### 3.3 Site Restoration

The aim of site restoration is to stabilize the sites., preferably with a perennial grass community that will prevent soil erosion and provide limited habitat within an industrial-use scenario. Disturbed areas surrounding each remediated waste site will also require revegetation.

#### 3.3.1 Backfill

Several sources of backfill exist. The order of preference is to (1) stockpile and reuse clean soil from the remediated site( the stockpiled soils may need to be covered with a crusting agent or crimped straw for interim dust control), (2) use backfill from nearby mounds left over from earlier facility construction, (3) use nearby ash piles, and(4) use materials from an existing borrow area. New borrow areas will not be created. Backfill removal that involves disturbing overburden in topsoil will need an excavation permit. The amount of backfill required will depend on the final contour of each of the sites, and the revegetation goals for each site.

#### 3.3.2 Final Contour

Current and past topographic maps of the area indicate that the OU had a rolling terrain before Hanford activities began. The area will be returned to a similar rolling topography by the conclusion of remedial and restoration activities. [What procedures will be used in restoring the topography, IE; heavy equipment, etc?]

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[There is no mention of the depth of the vadose zone and how its been affected.

Also, the actual contaminant levels in each area and their maximum concentration have not been mentioned.

Are there any monitoring methods of any other biological significance, such as vertebrates and invertebrates?]

3.3.3 Revegetation

3.3.4 Weed Control

3.4 Other Mitigation Actions

3.4.1 Air Quality

3.4.2 Noise

3.4.3 Emergency Preparedness

3.4.4 Worker and Public Protection

3.4.5 Traffic Planning

3.4.6 Surface Water Management

3.4.7 Reuse of Onsite Resources