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**Pacific Northwest  
National Laboratory**

Operated by Battelle for the  
U.S. Department of Energy

**Blanket Biological Review for General  
Maintenance Activities Within Active  
Burial Grounds, 200 East and 200 West  
Areas, ECR #2003-200-035**

M. Sackschewsky

August 2003



Prepared for the U.S. Department of Energy  
under Contract DE-AC06-76RL01830

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August 26, 2003

Mr. Daniel G. Saueressig  
Fluor Daniel Hanford, Inc.  
P. O. Box 1000, MSIN T4-04  
Richland, WA 99352

Dear Mr. Barnes:

BLANKET BIOLOGICAL REVIEW FOR GENERAL MAINTENANCE ACTIVITIES  
WITHIN ACTIVE BURIAL GROUNDS, 200 East and 200 West Areas, ECR #2003-200-035.

**Project Description:**

- General maintenance within the active burial grounds includes planting shallow rooted vegetation for erosion control, removal of deep-rooted vegetation, filling and compacting of subsidence areas, and repairing damage caused by wind or water erosion, animal burrowing, and insect intrusion. When soil is required for fill, it is usually obtained from spoil piles within the burial grounds.
- Active burial grounds covered by this blanket review (except where noted below) include: the 218-E-10 and 218-E-12B burial grounds in 200 East area, and the 218-W-3A, 218-W-3AE, 218-W4-B, 218-W-4C, 218-W-5, and 218-W-6 burial grounds in 200 West Area.
- Several areas are specifically NOT covered by this blanket review because they have not been developed for waste management purposes and they are dominated by native vegetation. Any disturbance within these areas will require a separate ecological review.

Areas that are not covered by this review include the undeveloped portion of 218-W-4C (along 16th street, east of W77269).

**Survey Objectives:**

- To determine the occurrence in the project area of plant and animal species protected under the Endangered Species Act (ESA), candidates for such protection, and species listed as threatened, endangered, candidate, sensitive, or monitor by the state of Washington, and species protected under the Migratory Bird Treaty Act,
- To evaluate the potential impacts of disturbance on priority habitats and protected plant and animal species identified in the survey.

### Survey Methods:

- For most of the areas covered under this review, site access restrictions did not allow for pedestrian surveys within the burial grounds. Therefore, most of the information available for these sites was inferred from visual observations from the burial ground perimeters.
- The active burial grounds within the 200 East and 200 West Areas covered under this blanket review were surveyed by C. A. Duberstein and N. A. Cadoret on 2 May 2003.
- Priority habitats and species of concern are documented as such in the following: Washington Department of Fish and Wildlife (1994, 1996), Washington State Department of Natural Resources (1997), and for migratory birds, U.S. Fish and Wildlife Service (1985). Lists of animal and plant species considered Endangered, Threatened, Proposed, or Candidate by the USFWS are maintained at 50 CFR 17.11 and 50 CFR 17.12.

### Survey Results:

- The 218-E-10 Burial ground has been previously disturbed, and is dominated by cheatgrass (*Bromus tectorum*) and Sandberg's bluegrass (*Poa secunda*), with some planted crested wheatgrass (*Agropyron cristatum*). The entire E-10 burial ground has been mown / bush hogged and receives regular herbicide applications.
- The 218-E-12B burial ground has been previously disturbed and is presently dominated by cheatgrass, Sandberg's bluegrass, assorted weedy species, with some areas dominated by crested wheatgrass. Most broadleaf plants have been eliminated by repeated herbicide applications over the last several years and overall plant cover on the active portions of the burial ground is relatively sparse.
- The 218-W-3A, 218-W-3AE, 218-W-4B, and 218-W-5 burial grounds are highly disturbed and are essentially devoid of vegetation except for very sparse cheatgrass, Russian thistle (*Salsola kali*), and crested wheatgrass.
- Most of the developed portion of the 218-W-4C burial ground is highly disturbed with sparse cover of cheatgrass, however some portions of this burial ground presently have stands of Indian ricegrass (*Oryopsis hymenoides*) and needle-and-thread grass (*Stipa comata*.) However, these stands are very sparse, presumably the results of greatly increased erosion induced by the summer 2000 fire just west of this burial ground.

- The majority of the eastern portion of the 218-W-6 burial ground has been previously disturbed and replanted to crested wheatgrass. A portion of the eastern (on the northern edge) and the entire western half of the burial ground that was previously undisturbed has been treated with herbicides and no longer contains living shrub or forbs.
- Two Washington State Watch List plant species of concern are known to occur in some of the active burial grounds. The stalked-pod milkvetch (*Astragalus sclerocarpus*) has been observed within 218-W-4C and at the extreme western edge of the 218-W-5 burial ground, the crouching milkvetch (*Astragalus succumbens*) has been observed on the south end of the 218-W-6 burial ground, within the Sub Reactor trench in 218-E-012B, and on the northeast side of 218-E-10.
- No migratory bird species were observed nesting within previously disturbed portions of the burial grounds covered by this review. However, given the size of the burial grounds, nesting by migratory birds should be expected especially in the vegetated areas. Species observed within the burial grounds during this and previous field surveys include horned larks (*Eremophila alpestris*), western meadowlarks (*Sturnella neglecta*), common ravens (*Corvus corax*), killdeer (*Charadrius vociferus*), long-billed curlews (*Numenius americanus*), Say's phoebes (*Sayornis saya*), loggerhead shrikes (*Lanius ludovicianus*) and American kestrels (*Falco sparverius*). American kestrels, great horned owls (*Bubo virginianus*), and other unprotected bird species are likely nesting among submarine reactor compartments.

#### **Considerations and Recommendations:**

- No plant and animal species protected under the ESA, candidates for such protection, or species listed by the Washington state government were observed in the vicinity of the proposed sites,
- Piper's daisy may still occur in some of the burial grounds. This is a Washington State Sensitive plant species, and as such is a Level III resource under the Hanford Site Biological Resources Management Plan (DOE/RL 2000). Compensatory mitigation is appropriate for this species when adverse impacts cannot be avoided. Battelle PNNL Ecological Compliance staff should be consulted prior to the initiation of major work activities within areas where this species has been identified (218-E-12, 218-E-10).
- The stalked-pod and crouching milkvetch are relatively common throughout 200 West area, therefore even if the few individuals within the active burial grounds are disturbed, it is not likely that the overall local population will be adversely affected. The Watch List is the lowest level of listing for plant species of concern in the State of Washington.

- No adverse impacts to species or habitats of concern are expected to occur from routine maintenance within the active portions of the 218-W-4C, 218-W-4B, 218-W-3, 218-W-3A, and 218-W-5 burial grounds, as well as the portion of 218-E-12B currently used for storage of retired submarine reactor cores.
- The remaining portions of the 218-E-12B burial ground and the entire 218-E-10 burial ground currently have extensive vegetative cover and it is highly likely that migratory birds, such as meadowlarks, horned larks, and curlews may nest in these areas. Therefore, it is recommended that if removal of the existing vegetation is required for burial ground operations, such removal only occur during the August through March time period (i.e. when the birds are not actively nesting). If vegetation removal is required prior to August 2003 or after 1 April 2004, please contact the ECAP staff for an additional analysis to ensure compliance with the Migratory Bird Treaty Act.
- Workers should be advised to watch for nesting birds within the burial grounds, if any are encountered, please contact the ECAP staff for further evaluation.
- This blanket review does not apply to the portions of 218-W-4C, and 218-W-6 previously described.
- This Ecological Compliance Review is valid until 30 April 2004.

Sincerely,

Michael R. Sackschewsky  
Ecological Compliance Assessment

MRS:cad

## REFERENCES

- U. S. Department of Energy. 2000. Draft Hanford Site Biological Resources Management Plan. DOE-RL 96-32 Rev. 0.
- U. S. Fish and Wildlife Service. 1985. Revised List of Migratory Birds; Final Rule. 50 FR 13708 (April 5, 1985).

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