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STATE ENVIRONMENTAL POLICY ACT (SEPA)
ENVIRONMENTAL CHECKLIST FORMS
FOR
LOW-LEVEL BURIAL GROUNDS
RCRA PERMIT APPLICATION
DOE-RL REVIEW DRAFT
September 15, 1989

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WASHINGTON ADMINISTRATIVE CODE
ENVIRONMENTAL CHECKLIST FORMS
[WAC 197-11-960]



DON'T SAY IT ... Write It!

DATE 1-04-90

TO Files 006211 & 6213

FROM Susan Wray (EDMC)

START

DOE-RL inadvertently signed the 9/15/89 version of the SEPA checklist (006213) instead of the 12/29/89 version (006211).

Record 006213 is in the Administrative Record and was the one sent to EPA and Ecology.

George Evans was informed of the discrepancy who elevated the situation to management.

TO MAKE LIFE LAST, PUT SAFETY FIRST

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SEPA ENVIRONMENTAL CHECKLIST
FOR
THE LOW-LEVEL BURIAL GROUNDS
RCRA PERMIT APPLICATION

A. BACKGROUND

1. Name of proposed project, if applicable:

Permitting and operation of the Low-Level Burial Grounds.

Information contained in this checklist applies only to the Low-Level Burial Grounds. Additional environmental information regarding the Hanford Site can be found in the Final Hanford Defense Waste - Environmental Impact Statement (U.S. Department of Energy, 1987, Final Environmental Impact Statement - Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes, DOE/EIS-0113, Richland, Washington).

2. Names of applicants:

U.S. Department of Energy-Richland Operations (DOE-RL) and Westinghouse Hanford Company (Westinghouse Hanford)

3. Address and phone number of applicants and contact persons:

U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

Contact persons:

R. D. Izatt, Director
Environmental Restoration Division
(509) 376-5441

R. E. Lerch, Manager
Environmental Division
(509) 376-5556

4. Date checklist prepared:

September 15, 1989

5. Agency requesting checklist:

State of Washington
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504-8711

90117761454

6. Proposed timing or schedule (including phasing, if applicable):

The Low-Level Burial Grounds (LLBG) are currently operating under interim status. At the time of closure, the LLBG will be closed as landfills. The schedule for closure has not been determined at this time.

7. Do you have any plans for future additions, expansions, or further activity related to or connected with this proposal? If yes, explain.

There are no plans for lateral extension of existing facilities or new facilities.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

This SEPA Checklist is being submitted to the Washington State Department of Ecology (Ecology) concurrently with the Resource Conservation and Recovery Act (RCRA) Part B Permit Application for the LLBG. A Dangerous Waste Permit Application Part A, Form 3, required for interim status, has been submitted to Ecology. A Memorandum-to-File and an Environmental Evaluation similar to this SEPA Checklist may be prepared for DOE-RL and Westinghouse Hanford internal documentation purposes.

9. Do you know whether applications are pending for government approvals of other proposals directly affecting property covered by your proposal?

No applications are known to be pending.

10. List any government approvals or permits that will be needed for your proposal, if known.

Ecology is the lead agency authorized to approve the RCRA Permit Application for the LLBG under requirements authorized by the RCRA, the Hazardous and Solid Waste Amendments of 1984, and Chapter 173-303 of the Washington Administrative Code. No other permits are known to be required at this time.

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

This project seeks final operating status of the LLBG which consist of existing and proposed earthen trenches used for storage and disposal of low-level and transuranic waste generated by many different facilities both on and off the Hanford Site. The LLBG include eight distinct low-level burial ground units, each of which consists of numerous trenches. Units are generally not contiguous, but collectively occupy approximately 518 acres. Retrievable storage units are trenches within the LLBG that

90117761455

are used to store waste that is mostly solids and minimal quantities of liquid low-level radioactive mixed waste. The low-level burial ground units are used to dispose of solid radioactive mixed waste. Trenches are excavated to depths of 16 to 50 feet with bottoms ranging from less than five feet to 100 feet wide. The quantity of mixed waste handled is expected to vary from 2,000 to 5,000 cubic feet per year.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The LLBG consist of eight distinct units located within the 200 West and 200 East Areas of the Hanford Site. These areas are located in Sections 35 and 36, T13N, R25E; Sections 31, 34 and 35, T13N, R26E; Sections 1, 2, and 12, T12N, R25E; Section 2, T12N, R26E. Maps and detailed location plans are contained in the permit application submitted with this checklist.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site: Flat, rolling, hilly, steep slopes, mountainous, other.

Flat.

- b. What is the steepest slope on the site (approximate percent slope)?

The approximate slope of the land at the facility is less than two percent.

- c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The near-surface soils found at the LLBG consists primarily of sands with gravel and cobbles. No farming is permitted on the site.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

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- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate the source of the fill.

A large amount of soil materials for a final cover will be required at the time of closure. Quantities are unknown at this time. A source for these material has been identified on the Hanford Site with the exception of bentonite which will be imported.

- f. Could erosion occur as a result of clearing, construction, or use? If so, describe.

Some wind erosion is likely to occur during the construction of trenches and operation of the facility. However, because of the flat topography, climate, soil type, and vegetation present at the site, erosional damage is expected to be low. The potential for wind erosion is expected to be higher than the potential for water erosion from precipitation events.

- g. About what percentage of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

An impervious final cover will be placed over the LLBG at the time of closure.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

No erosion control is expected to be required during the operation of the facility. At the time of closure, a final cover will be placed over the LLBG areas. The cover, which will be vegetated with grasses and have a gentle slope, is designed to minimize erosion due to wind and precipitation.

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Exhaust gases will be generated by construction equipment and operation vehicles.

- b. Are there any offsite sources of emissions or odors that may affect your proposal? If so, generally describe.

No.

90117761457

- c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

None at this time.

3. Water

a. Surface:

- 1) Is there any surface water body in or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet of) the described waters? If yes, please describe and attach available plans.

No.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area that would be affected. Indicate the source of the fill.

None.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

- 6) Does the proposal involve any discharges of waste material to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

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b. Ground:

- 1) Will groundwater be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Groundwater samples will be withdrawn and analyzed for dangerous and radioactive constituents as part of the LLBG groundwater monitoring program.

- 2) Describe waste materials that will be discharged into the ground from septic waste tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.

c. Water Run-off (including storm water):

- 1) Describe the source of run-off (including storm water) and methods of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other wastes? If so, describe.

Precipitation is a potential source of run-off which has the potential of flowing into LLBG trenches containing waste. No run-off control has been required at the facility. Due to the relatively dry climate and permeable soils, run-off into LLBG wastes is not expected during operations. At the time of closure, a run-off control drainage ditch will be installed around the entire perimeter of the final covers. The drainage ditch is designed to collect and remove surface run-off from the cover, internal cover drainage, and surface run-on from the local site terrain. Minimal surface run-off, resulting from precipitation events, is expected from the final covers.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

The potential for leachate generation and subsequent groundwater contamination exists. The final cover and leachate/liner systems for new trenches are designed to minimize the generation and release of leachate.

90117761459

- d. Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:

A liner/leachate collection system will be installed in all new trenches. The final cover is designed to minimize the infiltration of precipitation into the wastes contained in the LLBG. A run-off control drainage ditch will be installed around the entire perimeter of the final cover.

4. Plants

- a. Check the types of vegetation found on the site:

- deciduous trees: alder, maple, aspen, other
- evergreen trees: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

All grasses, forbs, and shrubs covering the LLBG are removed during trench excavation. A final cover will be placed over the LLBG areas at the time of closure which will be vegetated with grasses.

- c. List threatened or endangered species known to be on or near the site.

None on the LLBG. However, additional information concerning endangered and threatened plants on the Hanford Site can be found in the Final Hanford Defense Waste - Environmental Impact Statement.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.

The final cover will be vegetated with grasses at the time of closure.

5. Animals

- a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

- birds: hawk, heron, eagle, songbirds, other:
- mammals: deer, bear, elk, beaver, other:
- fish: bass, salmon, trout, herring, shellfish, other:

Passerine birds, pigeons, chukars, small mammals, and coyotes have been observed on the site. Several species of raptors nest in or near the

90117761460

200-Areas. Additional information on birds and animals found on the Hanford Site can be found in the Final Hanford Defense Waste - Environmental Impact Statement.

- b. List any threatened or endangered species known to be on or near the site.

The LLBG is not known to be used by any threatened or endangered species. Additional information concerning endangered and threatened animals on the Hanford Site can be found in the Final Hanford Defense Waste - Environmental Impact Statement.

- c. Is the site part of a migration route? If so, explain.

No. Additional information on the Hanford Site environment can be found in the Final Hanford Defense Waste - Environmental Impact Statement.

- d. Proposed measures to preserve or enhance wildlife, if any:

None.

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Diesel fuel, gasoline, oil to operate construction and operation equipment.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

90117761461

Environmental health hazards are not expected. However, the potential for exposure to hazardous chemicals and radioactivity exists due to the nature of the wastes handled. Procedures to prevent and manage hazards are presented in the permit application.

- 1) Describe special emergency services that might be required.

In the event of an emergency, fire, ambulance, and patrol assistance may be required. These services are available on the Hanford Site.

- 2) Proposed measures to reduce or control environmental health hazards, if any:

A contingency plan is provided in the permit application, which provides procedures to follow in the event of an emergency. The contingency plan is designed to minimize hazards to human health and the environment.

b. Noise

- 1) What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction and operation equipment creates noise on a daily basis during the normal operating hours (7:30 am to 4:00 pm).

- 3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties?

The LLBG is part of the Hanford Site, which contains many facilities for waste management and special nuclear material production.

- b. Has the site been used for agriculture? If so, describe.

No.

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- c. Describe any structures on the site.

On-site structures include waste disposal trenches, a railroad network for transporting waste, and chain fence around individual LLBG areas.

- d. Will any structures be demolished? If so, what?

No.

- e. What is the current zoning classification of the site?

The Hanford Site is zoned as an Unclassified Use district by Benton County.

- f. What is the current comprehensive plan designation of the site?

The 1985 Benton County Comprehensive Land Use Plan designates the Hanford Site as the "Hanford Reservation." Under this designation, land on the Site may be used for "activities nuclear in nature." Non-nuclear activities are authorized "if and when DOE approval for such activities is obtained."

- g. If applicable, what is the current master shoreline program designation of the site?

Does not apply.

- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

- i. Approximately how many people would reside or work in the completed project?

People will not reside in the completed project. Approximately 30 people operate the facility.

- j. Approximately how many people would the completed project displace?

None.

- k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

90117761463

1. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Does not apply; see B.8.

9. **Housing**

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. **Aesthetics**

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The final cover will typically have a height of approximately 15 feet.

- b. What views in the immediate vicinity would be altered or obstructed?

None.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

Does not apply.

11. **Light and Glare**

- a. What type of light or glare will the proposal produce? What time of the day would it mainly occur?

None.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

90117761464

- c. What existing offsite sources of light and glare may affect your proposal?

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

None.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Does not apply.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No part of the LLBG is listed on or proposed for inclusion on preservation registers. However, the White Bluffs Road which runs through part of the LLBG, is potentially eligible for the National Register. Additional information on the Hanford Site environment can be found in the Final Hanford Defense Waste -Environmental Impact Statement.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

A cultural resources survey of 200 West Area was conducted in 1988. The 200 West Area has a thin and random distribution of historic artifacts, with a slight concentration in and along the White Bluffs Road. Prehistoric artifacts occur almost exclusively within 100 meters of the White Bluffs Road which must have been an important trail for many centuries. Further cultural reviews will be required within 100 meters

90117761465

of the White Bluffs Road pursuant to Section 106 of the National Historic Preservation Act. Additional information on the Hanford Site environment can be found in the Final Hanford Defense Waste - Environmental Impact Statement.

- c. Proposed measures to reduce or control impacts, if any:

None at this time.

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Does not apply.

- b. Is the site currently served by public transit? If not, what is the approximate distance to the nearest stop?

The site is not publicly accessible and, therefore, is not served by public transit.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

None.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Does not apply.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will use an existing rail network to move waste materials.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Does not apply.

- g. Proposed measures to reduce or control transportation impacts, if any:

Does not apply.

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15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

- b. Proposed measures to reduce or control direct impacts on public services, if any:

Does not apply.

16. Utilities

- a. List utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Utilities are not needed for operation of the LLBG. Electricity, water, refuse, telephone, and sanitary sewer services are available at the existing LLBG administrative support buildings.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No new utilities are proposed.

C. SIGNATURES

The above answers are true and complete to the best of our knowledge. We understand that the lead agency is relying on them to make its decision.



R. D. Izatt, Director
Environmental Restoration Division
U.S. Department of Energy
Richland Operations Office

12/21/89

Date



R. E. Lerch, Manager
Environmental Division
Westinghouse Hanford Company

9-20-89

Date

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