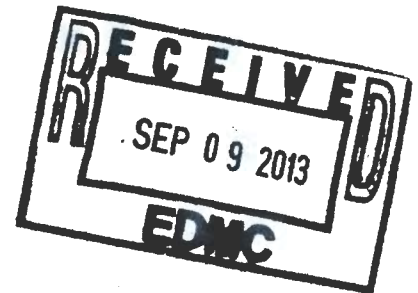


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STATE ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL CHECKLIST FORM

FOR THE
CLOSURE AND POSTCLOSURE OF THE
NONRADIOACTIVE DANGEROUS WASTE LANDFILL

July 16, 1990



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

D-6-1

STATE ENVIRONMENTAL POLICY ACT ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

Closure and postclosure of the Hanford Site Nonradioactive Dangerous Waste Landfill (NRDWL).

Information contained in this checklist applies only to the NRDWL.

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:

Director
Environmental Restoration Division
U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352
(509)-376-5441

Manager
Environmental Division
Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352
(509)-376-5556

4. Date checklist prepared:

July 16, 1990

5. Agency requesting checklist:

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

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

The NRDWL began receiving waste in 1975 and was operationally closed in 1985. Closure activities are planned to be initiated in 1992 and completed in 1995, at which time postclosure care activities will start. The postclosure care period is expected to be at least 30 years.

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

No.

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

This *State Environmental Policy Act* (SEPA) Checklist is being submitted to the Washington State Department of Ecology (Ecology) concurrently with the closure and postclosure plan for the NRDWL. A revised Part A application for the NRDWL is contained in the accompanying closure and postclosure plan. A postclosure permit application will be prepared following the approval of this plan.

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

No applications are known to be pending.

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

Ecology approval of the NRDWL Closure and Postclosure Plan will be required. No other governmental 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 pertains to the closure and postclosure care of the NRDWL, which is a nonradioactive dangerous waste landfill. The NRDWL, which occupies approximately 10 acres, was used to dispose of dangerous chemicals, asbestos, and sanitary solid wastes in trenches.

The proposed project strategy is to close the site as a landfill in accordance with Washington Administrative Code (WAC) 173-303-610 and 173-303-665(6). All existing waste, including containerized dangerous waste, asbestos materials, and sanitary waste, will be left in place, and a final cover will be constructed over the entire site. Proposed closure activities include subsurface characterization, the installation of four additional groundwater monitoring wells, groundwater tracer testing, and cover construction. The cover is designed to minimize the infiltration of precipitation into the buried waste. Proposed postclosure care activities include an inspection and maintenance program, groundwater quality monitoring, and final cover performance monitoring.

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 NRDWL is located in the 600 Area of the Hanford Site about 3.5 miles southeast of the 200 Areas in Section 20, T12N, R27E. Location and topographic maps and site plans are contained in the closure and postclosure plan submitted with this checklist.

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____.

The general description of the site is flat to gently rolling.

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

The sides of two open trenches, which have a slope of approximately 45 degrees, represent the steepest slopes on the site. These trenches will be infilled and graded as part of the proposed closure process. Other than the trench sides, the average slope of the site is less than 2 percent. The average slope of the facility following closure will not exceed 3 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 NRDWL consist primarily of eolian and fluvial sands with some gravel. No farming is permitted on the site.

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

No.

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

A total of approximately 84,000 tons of silt topsoil and 8,000 tons of local sand will be used in the construction of the final cover. The silt will come from a location on the Hanford Site known as the McGee Ranch. Sideslope construction will require approximately 3,000 tons of cobble or riprap from a borrow pit on the Hanford Site (location to be determined).

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

Some wind erosion currently occurs at the site due to the lack of vegetation and will likely continue until the proposed final cover is placed and vegetated.

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

Impervious materials will not be used for surfacing.

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

A final cover will be placed over the NRDWL. The cover, which will be vegetated with grasses and have a gentle slope, is designed to be resistant to expected erosional processes.

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.

Some dust will become airborne during closure activities (e.g., construction of the final cover). Exhaust gases will be generated by equipment (e.g., construction equipment and personnel vehicles) as closure and postclosure activities are carried out.

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

No.

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

None.

3. Water

a. Surface

- 1) Is there any surface water body on, 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.

Does not apply.

- 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 fill material.

Does not apply.

- 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.

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 several constituents as part of the NRDWL groundwater monitoring program. The NRDWL groundwater monitoring network currently consists of seven wells, and four

additional wells are planned. Each well will be sampled at least semiannually. Before a sample is collected from a well, approximately three borehole volumes of water will be withdrawn to purge the well. Less than 20,000 gallons of water are expected to be withdrawn each year in support of groundwater monitoring at the NRDWL.

- 2) Describe waste material that will be discharged into the ground from septic 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 method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Precipitation is a potential source of run-off. However, because of the relatively dry climate and the permeable nature of the upper layer of the cover and native soils, little, if any, run-off is expected. No run-off control structures are required. No surface water bodies exist in the vicinity of the NRDWL.

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

The potential for leachate generation from the infiltration of precipitation and subsequent groundwater contamination will be minimized, if not eliminated, by construction of a final cover over the entire site. Systems will be installed to monitor the performance of the cover and the groundwater chemistry. No surface water bodies exist in the vicinity of the NRDWL.

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

The final cover is designed to minimize run-off and the infiltration of precipitation into the waste layer. A run-off control drainage ditch will be installed around the entire perimeter of the final cover. No surface water exists in the vicinity of the NRDWL.

4. Plants

- a. Check or circle 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?

The NRDWL currently is vegetated with a sparse cover of invader grasses and forbs. A final cover will be placed over the site. The uppermost layer of the cover will consist of soil vegetated with grasses.

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

None on the NRDWL. Information concerning endangered and threatened plants on the Hanford Site can be found in the *Final Environmental Impact Statement - Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes*, DOE/EIS-0113, U.S. Department of Energy, 1987, Richland, Washington and the *Hanford Site National Environmental Policy Act (NEPA) Characterization*, PNL-6415, 1988.

- 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 seeded 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, ravens, raptors, small mammals, and coyotes have been observed on the site. Additional information on animals found on the Hanford Site can be found in the documents referred to in the answer to checklist question 4.c.

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

The NRDWL is not known to be used by any threatened or endangered species. Information concerning endangered and threatened animals on the Hanford Site can be found in the documents referred to in the answer to checklist question 4.c.

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

No. Information on the Hanford Site environment can be found in the documents referred to in the answer to checklist question 4.c.

- 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.

Fossil fuels will be used to operate monitoring equipment and personnel vehicles.

- 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.

Environmental health hazards are not expected as a result of this proposal. This proposal is designed to prevent the escape or exposure to dangerous waste from the NRDWL.

- 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:

All existing dangerous waste will remain landfilled. A final cover will be constructed to form an additional barrier over the waste. Postclosure inspection and maintenance of the facility and environmental monitoring will be performed.

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.

Closure and postclosure activities will create noise during daylight hours. Equipment used to construct the final cover will create the most significant amount of noise. The remote location of the NRDWL will prevent any detectable increase in noise levels off the Hanford Site. Postclosure activities are considered to be low-level noise activities that are undertaken several times a year during normal business hours.

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

Vehicles and equipment will meet manufacturers requirements for noise suppression.

8. Land and Shoreline Use

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

The NRDWL is part of the Hanford Site that contains many facilities for waste management and special nuclear material production. The NRDWL is a remotely located landfill.

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

No.

- c. Describe any structures on the site.

The only structure onsite is an 8-foot high perimeter fence that encloses the facility.

- 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 designated the Hanford Site as the "Hanford Reservation." Under this designation, land on the Site may be used for "activities nuclear in nature." Nonnuclear activities are authorized "if and when the DOE approval for such activities is obtained."

- g. If applicable, what is the current shoreline master 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 nor will people be required to operate the facility on a daily basis. Postclosure care activities will require limited inspection, maintenance, and monitoring activities.

- 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.

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

Does not apply (see response to checklist question B.8.f.).

9. Housing

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

Does not apply.

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

Does not apply.

- 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 raise the elevation of the existing surface a maximum of about 10 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:

The final cover is designed to return the site to near natural conditions.

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.

- 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:

None.

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 NRDWL is listed on or proposed for inclusion on preservation registers. Additional information on the Hanford Site environment can be found in the documents referred to in the answer to checklist question 4.c.

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

No resources of historic, archaeological, scientific, or cultural importance are known to be on or next to the site. Additional information on the Hanford Site environment can be found in the documents referred to in the answer to checklist question 4.c.

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

Does not apply.

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).

No.

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

No.

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

Inspection and monitoring of the facility will require visits several times a year to the site.

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

Does not apply.

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

No public utilities exist onsite. The NRDWL is a remotely located landfill.

- 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 utilities are proposed.

C. SIGNATURES

The above answers are true and complete to the best of my knowledge. I 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

Date

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

Date

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

Does not apply.

16. Utilities

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

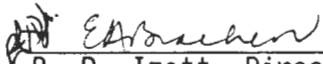
No public utilities exist onsite. The NRDWL is a remotely located landfill.

- 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 utilities are proposed.

C. SIGNATURES

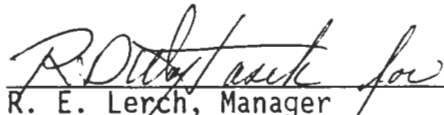
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.



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

8-29-90

Date



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

8/29/90

Date