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SEPA ENVIRONMENTAL CHECKLIST FOR THE 2101-M POND INTERIM STATUS CLOSURE PLAN

A. BACKGROUND

1. Name of proposed project:

   Closure of the 2101-M Pond site.

   Information contained in this checklist pertains only to the 2101-M Pond.

   In the context of this document, "site" refers to the physical structure that is the 2101-M Pond, whereas "Site" refers to the Hanford Site.

2. Name of applicants:

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

3. Address and phone number of applicant and contact person:

   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) 376-7277

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

4. Date checklist prepared:

   February 10, 1989

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5. Agency requesting the checklist:

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

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

   Initial closure activities have been completed. The 2101-M Pond was closed to disposal of dangerous wastes in July 1985. The pond soil has been sampled to assess the presence of dangerous waste constituents. Ground-water monitoring is currently being conducted to assess the impact of past waste disposal practices at the 2101-M Pond on the uppermost aquifer. Ground-water samples will be taken quarterly through May 1989. Samples will, thereafter, be collected

on a semiannual basis until final closure has been certified. Upon approval of the 2101-M Pond Closure Plan, it is anticipated that final closure will be completed within 180 days.

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

   The 2101-M Pond will remain open to disposal of nondangerous waste water from the 2101-M Building and the adjacent rainwater run-off ditch.

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 State of Washington, Department of Ecology (Ecology) concurrently with revision 1 of the Interim Status Closure Plan for the 2101-M Pond.
   - A revised Part "A" permit application was submitted in August 1987, and again in November 1987 to Ecology, under identification number WA890008967.
   - 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? If yes, explain.

   No other applications to government agencies are pending approval.

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

    Ecology and the U.S. Environmental Protection Agency (EPA) are the only agencies authorized to approve or permit final closure of the facility under requirements authorized by the Resource Conservation and Recovery Act of 1976 (RCRA), the Hazardous and Solid Waste Amendments of 1984 (HSWA), and Chapter 173-303-400 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.

    Closure of the 2101-M Pond as a Resource Conservation and Recovery Act (RCRA) site involves:

- o Pond soil sampling. This activity has been completed. Analysis to date of the samples has demonstrated that concentrations of organic and inorganic constituents (waste residue) present in the pond soil do not represent a threat to human health or the environment.

- o Ground-water monitoring. This activity is currently being conducted to assess the impact of past waste disposal practices at the 2101-M Pond on the uppermost aquifer.

  - o Ground-water samples will be taken quarterly through May 1989.

  - o After May 1989, samples will be collected on a semiannual basis until final closure has been certified.

- o Submission of Certification of Closure to Ecology.

  - o This certification will be signed by DOE-RL and an independent professional engineer registered in the State of Washington. The certification states that the pond has been closed in accordance with the approved closure plan.

The proposed future uses of the site are described in the answer to question A.7, above.

The size of the project is described in the answers to questions A.12 and B.8.c., below.

12. Give the location of the proposal. Give sufficient information for a person to understand the precise location of the 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 2101-M Pond is located in the NW 1/4 of Section 10, T12N, R26E in the 200 East Area of the Hanford Site, adjacent to the 2101-M Building. The site is bordered by 2nd Street to the south and Ames Ave. to the west. Maps and plans of the site are located in the closure plan submitted with this checklist.

B. ENVIRONMENTAL ELEMENTS

1. <u>Earth</u>

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a. General description of the site (circle one): 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 around the 2101-M Pond is less than 2%.

c. What general types of soils are found on the site? If you know the classification of agricultural soils, specify them and note any prime farmland.

The general soil types found around the 2101-M Pond consist of eolian silt and fine sands overlying glaciofluvial sands with some silt and gravel. The soil becomes gravelly at approximately 350 feet to basalt bedrock at about 500 feet. No farming is permitted on the Hanford 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 the source of the fill.

No filling or grading is proposed for this site.

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

There is the possibility of some erosion due to wind. Three strips of land were bladed during pond soil sampling activities. Those strips are approximately 180 x 30 feet, 40 x 60 feet, and 120 x 30 feet. These strips were covered primarily by cheatgrass and tumbleweeds and are, therefore, being allowed to revegetate themselves naturally since the completion of sampling activities. (These are previously disturbed areas. In the years of use since the construction of the pond, sagebrush has given way to cheatgrass and tumbleweed.)

Reducing, to some degree, the erosion impact during the re-vegetation process is a natural wind break of trees and brush protecting the largest bladed strip on both sides of its length. The remaining two bladed areas are surrounded by sagebrush and cheatgrass.

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

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None.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if there are any?

None.

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.

Minor amounts of exhaust will be generated by vehicles used to gain access to the site for ground-water sampling. (For a detailed description of ground-water sampling activities please see the answer to question B.3.b.1, below.)

b. Are there any off-site 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?

Does not apply.

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.

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 of the site that would be affected. Indicate the source of fill material.

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 materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground:

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

During the first year, ground-water will be withdrawn from 4 sampling wells on a quarterly basis, to obtain ground water samples and data necessary to comply with state and federal ground-water monitoring requirements. During the second year, ground water will be withdrawn on a semiannual basis. If monitoring is required after the second year, it will be as proscribed by state and federal requirements.

Ground-water quality data from samples upgradient of the facility are compared to samples downgradient of the facility to determine whether contaminants are present in the ground-water and, if present, their concentration and distribution and whether they originated from disposal of hazardous wastes in the 2101-M Pond.

Prior to sample collection, wells are purged per the sample collection procedure corresponding to the type of pump installed in the well. The purge time is calculated based on the volume of water within the well and the pump discharge rate. A minimum of three borehole volumes of water are removed (purged) from each well to ensure collection of a representative sample of the water in the aquifer. The volume of ground-water withdrawn for purging and sampling depends on the conditions encountered and the needs at each well. However, withdrawals generally do not exceed 850 gallons per monitoring well, per quarter, and will not exceed 5,000 gallons per day.

Because the 2101-M Pond is an unlined body of water, pond water will migrate to ground-water. Travel time for pond surface water to ground-water has not been determined. It is, therefore, not known how long pond water will take to migrate to ground-water.

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.

Discharges to the 2101-M Pond are comprised of nondangerous waste water from the heating, ventilation, and air-conditioning (HVAC) system for the 2101-M Building and from certain sinks in the central and south wings of that building, as well as seasonal overflow from the adjacent rainwater run-off ditch servicing the 2101-M Building parking lot.

There is no metering on the discharge lines from the cooling system (primarily "swamp coolers"); hence, no data are available regarding waste water discharged from that system to the 2101-M Pond. There is, however, metering on the steam lines of the heating system. Condensate from those lines is discharged to the 2101-M Pond at an average rate of 1,224,600 gallons per year.

Waste water from sinks in the 2101-M Building is projected to be of an insignificant volume compared to that discharged from the HVAC system. There are 41 drains (sinks, hoods, and eyewash stations) in the building that discharge to the 2101-M Pond. A number of those are to be removed. Additionally, those sinks dedicated to laboratory waste will be subject to physical and administrative controls.

To control corrosion of the piping and ducting through which the steam of the heating system flows, a filming corrosion inhibitor containing straight chain primary amines is added to the steam at a concentration of approximately 14 p/m. The material safety data sheet for the product states that it is not hazardous. To control organic growth in the water supplied to the "swamp coolers," trichloro-s-triazinetrione, a microbicide, EPA Registration No. 4643-47, is added in tablet form. It is administered to the system in keeping with the instructions governing its use such that it is not considered a hazardous waste.

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 waters? If so, describe.

Run-off water is not anticipated from the 2101-M Pond. This projection is based on:

- **The relationship between the depth of the pond (3 to 9 feet) and the normal standing water level in the pond (less than 1 foot).**
- **The fact that the Hanford Site is located in a low rainfall area and the sandy soil around the pond allows for rapid percolation of that rainwater.**

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

As stated in the answer to question B.3.c.1, above, no run-off water is anticipated from the 2101-M Pond. However, as stated in the answer to question A.7 above, the 2101-M Pond will remain open to overflow from the adjacent nondangerous rainwater run-off collection ditch. Hence, it may be possible for rainwater run-off to enter groundwater via the 2101-M Pond.

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

None. (Please see the answer to question B.3.c.1.)

4. <u>Plants</u>

a. Check the types of vegetation found on site:

___ deciduous trees
___ evergreen trees
___ shrubs
___ grass
___ pasture
___ crop or grain
___ wet soil plants
___ water plants

The water of the pond is overgrown with horsetail, cattails, and sedges. Small trees, primarily black cottonwood, peach leaf, sandbar willow, Russian olive, and Rocky Mountain Juniper, dominate the banks.

Information concerning the general Hanford Site environment can be found in the U.S. Department of Energy, 1987, <u>Final Environmental Impact Statement - Disposal of Hanford Defense High-Level, Transuranic and Tank Wastes, DOE/EIS-0113, Richland, Washington</u> and the Energy Research and Development

Administration, 1975, Final Environmental Impact Statement - Waste Management Operations, Hanford Reservation, ERDA-1538, Washington, D.C.

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

None.

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

No threatened or endangered plant species are know to exist on, or in, the immediate vicinity of the 2101-M Pond. Additional information concerning the Hanford Site environment can be found in the final environmental impact statements referenced in the answer to question B.4.a.

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

None.

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

The following birds are known to be in the vicinity of the 2101-M Pond: Western kingbirds, doves, starlings, barn swallows, sage sparrows, nighthawks, owls, and magpies. (The magpies have nests in the trees next to the pond.)

Mammals known to frequent the site are: deer mice, house mice, cottontail rabbits, and coyotes. Additional information concerning the Hanford Site environment can be found in the final environmental impact statements referenced in answer to question B.4.a.

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

No threatened or endangered species are known to exist on the 2101-M Pond facility site. Additional information on the Hanford Site environment can be found in the final environmental impact statements referenced in answer to question B.4.a.

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

No. Additional information concerning the Hanford Site environment can be found in the final environmental impact statements referenced in answer to question B.4.a.

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

None. Additional information concerning the Hanford Site environment can be found in the final environmental impact statements referenced in answer to question B.4.a.

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.

Gasoline-powered generators will be required to power groundwater monitoring well pumps during sampling until closure is certified.

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:

Does not apply.

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.

No.

1) Describe special emergency services that might be required.

In the event of an unexpected emergency, fire, ambulance, and patrol services are available on the Hanford Site.

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

Does not apply.

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.

On a short-term and a long-term basis, the only noise expected to be associated with the project is the operation of generators to power sampling well pumps, and the operation of trucks to transport the generators to the site.

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

Generators will meet manufacturer's requirements for noise suppression, and in no case will exceed the OSHA maximum permissible 8-hour level of 90 decibels.

8. Land and Shoreline Use

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

The 2101-M Pond is currently being used for the disposal of nondangerous waste water from the 2101-M Building and the adjacent rainwater run-off ditch. (For additional information, see the answer to question B.3.b.2.)

Property adjacent to the 2101-M Pond is part of the 200 East Area of the Hanford Site. The 200 East Area, as well as the remainder of the Hanford Site, is used for, or designated for the use of, the production of special nuclear materials and the management of the wastes associated with the production of those materials.

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

No portion of the Hanford Site has been used for agricultural purposes since 1943.

c. Describe any structures on the site.

Four ground-water monitoring wells, one upgradient and three downgradient, surround the site. These wells provide information regarding stratigraphy, ground-water flow direction, and the water quality of the upper portion of the unconfined aquifer.

Each well has been constructed to a total depth of approximately 355 feet and conforms to the requirements of WAC 173-160, "Minimum Standards For Construction of Wells".

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 by Benton County as an Unclassified Use (U) district.

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 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?

None.

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.

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

Please see the answer to question B.8.f.

9. <u>Housing</u>

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:

None.

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?

No structures are proposed for the site.

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

None.

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

None.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of 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 off-site sources of light or glare may affect your proposal?

None.

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

None.

12. Recreation

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

None. (Please see the answer to question B.8.a.)

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. (Please see the answer to question B.12.a.)

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 2101-M Pond site is listed on, or proposed for inclusion on, preservation registers. Additional information concerning the Hanford Site environment can be found in the environmental impact statements referenced in answer to question B.4.a.

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

There are no known archaeological, historical, or native American religious sites in the area of the 2101-M Pond. Additional information concerning the Hanford Site environment can be found in the environmental impact statements referenced in answer to question B.4.a.

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. The public is not allowed unauthorized/unescorted access to the Hanford Site.

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

No. (Please see the answer to question B.14.a.)

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.

None.

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:

None.

16. Utilities

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

None.

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.

None.

C. SIGNATURES

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

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

9-22-89
Date

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

9-7-89
Date